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THE Adjutant General has decided to delay the publication of the Army Register until the Senate has acted upon the nominations made prior to December 31.

SENATOR DOLPH has sent his bill providing for sea coast defence to the Chief of Ordnance of the Army for his views. The committee will meet next week, and will probably report the bill in about the same shape as it passed the Senate last year.

WOULD it not be well to have a law passed authorizing the transfer to the sixty-four-year list of all retired Army officers who have reached that age? This would put these veterans where they would have come in the ordinary course of nature, and would leave the disability list open for younger men.

MR. JOSEPH BAUMER has been re-elected clerk of the House Committee on Naval Affairs. The committee made an official visit to the Secretary of the Navy at the Navy Department on Wednesday, where they made the acquaintance of the various bureau chiefs and other officials of the Department. An official inspection of the Washington Navy-yard will also shortly be made by the full committee.

THE statements concerning General Terry's retirement in consequence of his present illness have no foundation. He is not eligible for retirement except under the disability law and, although he is at present too ill to perform duty, there is no thought of bringing him before a retiring board. He is now on four months' sick leave, the first absence he has had on this account, and should he not recover at the expiration of that time his leave will be extended indefinitely.

FROM the Washington office of the Hotchkiss ordnance firm it is learned that the several shops at Hartford have been erected, machinery put in and guns of each of the several patterns contracted for by the Navy Department are in course of construction. Several of the guns, it is expected, will be ready for delivery in about three weeks. Lieutenant Very, who came to this country to establish the American factory, arrived in Paris December 20. He is now in Rome. He will return to this country in March or April next.

THE Secretary of the Navy has expressed himself as satisfied that his efforts last year to press the Bureau re-organization scheme was somewhat of a mistake, and while he still believes that some such step will be eventually necessary he is content, at present, to let the bureaus remain as heretofore. Mr. Herbert, however, is quoted as saying that he intends to revive the original bill, with slight modifications, and press it to an issue the present session of Congress. The friends of the proposition do not, however, think it has any chance of becoming a law.

AN officer of the cavalry says in a letter to us: "Does it seem to the JOURNAL quite the fair thing, that the cavalry, after suffering as it did through the reduction, in 1870, of the infantry, should now, by the Manderson, Steele and Wheeler bills, have no part in the benefits of an increase? Having been forced to help in clearing the table of crow should we not now be offered a slice of the turkey? And how about the provision in the Steele bill singling

out the company officers of cavalry for a reduction of pay in addition to the disabilities indirectly imposed by the other bills? Has the 'Horse' no friends?"

THE House Committee on Appropriations organized the early part of the week and immediately prepared and reported to the House the General Deficiency bill making appropriations for deficiencies for 1887 and prior years, which failed in conference last session. The bill appropriates in all the sum of \$2,951,808, while the old bill as agreed upon in conference called for \$4,275,023. Among the items omitted are amounts of \$120,000 to complete armament of the *Chicago*, *Boston*, and *Atlanta*; \$84,000 for these vessels under the Bureau of Construction and Repair, and \$56,360 under the Bureau of Steam Engineering. Among the items of interest to the Army and Navy contained in the bill are: \$3,680.00 for mileage to Army officers; \$150,000 for Army transportation; about \$30,000 to supply deficiencies under the several bureaus of the Navy Department and Marine Corps; \$12,500 back pay to the civilian members of the Advisory Board; \$18,769.23 for payment of Graham mileage claims certified to Congress last session by the Fourth Auditor and Second Comptroller of the Treasury. There is also a large appropriation for back pay and bounty which is to be disbursed by Major Dewey, in charge of the back pay and bounty division of the Paymaster-General's Office.

THE board on the consolidation of work in the Adjutant-General's office, Colonel Kelton, President, has completed its labors, the result of which will probably soon appear in a general order. Among the changes recommended is the consolidation of the general and special order divisions. A large reduction in the number of papers forwarded from division and department headquarters to the A. G. O. is proposed, as well as many other changes calculated to simplify the work of the office. As there will soon be considerable moving around, incident to the occupancy of the new wings of the State, War and Navy Department building, it is expected that the consolidation of the Order divisions will take effect in a very few weeks. The lately completed portion of the Department building will be turned over by Col. Casey, Jan. 20. The outside bureaus will commence to move in immediately thereafter. The Secretary of War has, with the help of Col. Casey, completed his assignment of rooms as follows: Engineers—First story of the west and centre wings and basement. Ordnance—First story, west wing. Surgeon-General—Third story, west and centre wings. Quartermaster-General—Third story, west and centre wings; second story, centre wing; attic, centre wing. Commissary-General—Fourth story, west and centre wings. Paymaster-General—Fourth story, west and centre wings. Judge-Advocate-General—Second story, west wing. Adjutant-General—Basement, centre wing; second story, west wing; third story of the north wing. The Secretary of War will occupy the north half of the second story, west wing, and the west half of the second story, north wing. The Adjutant General's office, on the second floor, will extend to the room now occupied by the Secretary, whose office will be moved into rooms specially fitted up for the purpose on the second floor, immediately over the main entrance of the west wing and corresponding with the office of the Secretary of the Navy in the east wing. The office vacated by the Secretary of War will be occupied by Ad-

jutant-General Drum. General Sheridan and his aides will remain in their present quarters.

OUR space is largely occupied this week with the text of the various bills presented to Congress, which will, if they become laws, greatly affect the interest of the Services. For the Army we have Mr. Steele's bill, which appears on page 487. It proposes to establish the three-battalion system for all arms of the Service, and accompanies this change with the incongruous provision that the number of enlisted men shall be limited to 25,000, including detachments, N. C. staff, etc. Mr. Manderson's three-battalion bill has the start of this measure, the Senate Military Committee having this week unanimously agreed to adopt his report of last year in its favor. It has already been fully discussed here. Another bill insists that Army officers should receive brevets for Indian service, a preamble accompanying it declaring this to be the intent of the existing law. Mr. Breckenridge (H. R. 1463) proposes details for eight Army officers as attachés to our principal foreign legations. Senator Manderson introduces two bills, one reorganizing the Subsistence Department and the other providing for monthly payments for the Army and to increase the Pay Department to enable them to do the work.

For the Navy we have Mr. Merriman's bill to provide auxiliary naval vessels (H. R. 1674). Besides this, there is the bill of Mr. Whitthorne, the provisions of which have been so thoroughly discussed. Mr. Whitthorne proposes to allow vessels built in accordance with the requirements of the Navy Department thirty cents per ton for each mile steamed. Mr. Merriman proposes to give a yearly subsidy of from \$7.50 to \$15 a ton, according to the speed of the vessel. On page 485 we give the result of the conference between Mr. Whitthorne and the New York Committee on Naval Reserve, with the text of the bill proposed by that committee with reference to the Merchant Marine. That providing for the yachtsmen appeared in the JOURNAL of Dec. 24, 1887, p. 420. Mr. McKinney's bill (H. R. 1621) regulates the selection of naval cadets, the method of promotions in the Navy and changes the number of officers in the existing grades, requires the Chief of the Bureau of Yards and Docks to be a civil engineer and the Superintendent of the Naval Academy a Professor of Mathematics, abolishes mates and gives ten warrant officers the relative rank of lieutenant, makes the Commandant of the Marine Corps a brigadier general, requires officers to undergo a medical examination with reference to retirement once in two years and provides an Assistant Secretary for the Navy. H. R. 1657 regulates staff rank and promotion in the Marine Corps. We have also House bills 4396, requiring sea service for promotion; 4366, giving meritorious officers the rank and sea pay of their grade when retired; 4287, fixing the number of ensigns at fifty and allowing four warrant officers to be promoted to that grade each year. We have also a bill carrying out the suggestions of the Chief of the Bureau of Equipment and one making a place for the cadet engineers so unhandsofly dropped out of the Service. Of interest to both services is the bill appropriating \$750,000 for a gun factory and appropriating over nine millions of dollars besides for new ordnance. H. R. 1513 appropriates a million dollars for a gun factory at Watervliet Arsenal.



## PERSONAL ITEMS.

GEN. H. M. BLACK, Col. 23d U. S. Inf., will reach his 61st birthday on Sunday next.

"OLD SNAKE," a private of Indian scouts at Fort Custer, has been appointed Sergeant.

LIEUT. E. P. ANDREWS, 5th U. S. Cav., is East from Fort Leavenworth, on a six weeks' vacation.

GEN. H. W. WESSELLA, U. S. A., visited New York city early in the week, registering at the New York Hotel.

MAJOR G. E. POND, U. S. A., has rejoined at Fort Riley, Kans., from an official visit to Fort Leavenworth.

LIEUT. P. E. TRAUB, 1st U. S. Cav., has taken charge of recruiting matters at Fort Maginnis, Montana.

SURGEON S. M. HORTON, U. S. A., on leave until May next, from Fort Adams, R. I., is at 711 Pine St., St. Louis.

LIEUT. B. B. BUCK, 16th U. S. Inf., holds second place among the Texas sharpshooters for 1887. Score, 555.

CAPT. W. A. RAFFERTY, 8th U. S. Cav., of Fort Leavenworth, is on a few weeks' visit to Morris-town, N. J.

LIEUT. G. B. WALKER, 6th U. S. Inf., lately visiting at Evansville, Ind., has had his leave extended two months.

LIEUT. J. A. MANEY, 15th U. S. Inf., now on leave, is expected to rejoin at Fort Buford, Dakota, early in February.

LIEUT. J. R. HICKEY, 8th U. S. Cav., rejoined at Fort Concho, this week, from a fortnight's visit to San Antonio.

CAPT. H. P. PERRINE, 6th U. S. Cav., visiting at Trenton, N. J., has received a six months' extension of his sick leave.

LIEUT. LEWIS MERRIAM, 4th U. S. Inf., leads the sharpshooters in the Department of the Columbia for 1887. Score, 559.

CAPT. J. C. SCANTLING, 2d U. S. Art., returned to Mount Vernon Barracks, Ala., early this week, from a short leave of absence.

LIEUT. L. W. CORNISH, 5th U. S. Cav., who has been visiting at 461 Fourth St., Boston, Mass., will remain East a few weeks longer.

LIEUT. R. T. EMMETT, 9th U. S. Cav., who has been spending the holidays at New Rochelle, N. Y., will remain East for some weeks yet.

GEN. W. P. CARLIN, Col. 4th U. S. Inf., on leave from Fort Sherman, Idaho, is a recent guest at the Fifth Avenue Hotel, New York city.

COL. JOHN S. BILLINGS, Surgeon U. S. A., is to deliver a course of lectures before the Lowell Lecture Association of Boston, during the winter.

LIEUT. S. A. SMOKE, 18th U. S. Inf., has been detailed to pick up a few good recruits for Uncle Sam's Army, at or near Denver, Colorado.

LIEUT. W. H. WASSELL, 9th U. S. Inf., who has been visiting at Pittsburg, Pa., for some time past, will leave the service for civil pursuits, Jan. 31.

CAPT. H. C. WARD, 16th U. S. Inf., who has been spending a few months' leave with friends in Massachusetts, will shortly rejoin at Fort McIntosh, Tex.

LIEUT. DAVID PRICE, 1st U. S. Art., and Mrs. Price, lately in the East, and who go to the Presidio, are temporarily at the Palace Hotel, San Francisco.

LIEUTENANT D. N. McDONALD, 4th U. S. Cav., who is visiting friends at Carthage, Tenn., will leave the Service and engage in civil pursuits early in March next.

COL. H. G. LITCHFIELD, U. S. A., who has been spending some time in New York city, leaves next week for St. Augustine, to resume duty with his battery at St. Francis Barracks.

LIEUT. LEA FENIGER, 23d U. S. Inf., of Fort Brady, Mich., is at present fulfilling the several post duties of Adjutant, Quartermaster, Commissary, Treasurer, Ordnance Officer and Signal Officer.

COL. J. C. BRECKINRIDGE, Inspector General, U. S. A., and Mrs. Breckinridge, and Lieut. Philip Reade, U. S. A., and Mrs. Reade, are members of the Onaway Toboggan Club of Chicago, a flourishing society organization.

CAPT. CHANDLER P. EAKIN, 1st U. S. Art., lately before a retiring board at San Francisco, is expected in Philadelphia in a few days. Should he be soon retired, that efficient officer and adjutant, Lieut. J. M. K. Davis, will attain a captaincy.

COLONEL W. A. LOWRY, who died recently at Atlanta, Ga., was a strong personal friend of Andrew Johnson, and was chiefly instrumental in placing him in his first office, that of counselman at Greenville. Colonel Lowry was a successful merchant and left a large fortune.

COLONEL D. R. LARNED, Paymaster, U. S. A., recently transferred from the Massachusetts to the California Commandery Loyal Legion will now, under his recent assignment to duty in Washington, find it necessary to transfer to the District of Columbia Commandery.

"A LITTLE more grape, General Bragg," will doubtless be his welcoming salutation at the Mexican capital, should the President appoint him to that mission. But we may rest assured that the gallant Wisconsin will be much more careful than some of his predecessors about "taking any more."

LIEUT. H. L. HAWTHORNE, 2d U. S. Art., who has been visiting here, says the Cincinnati Gazette, has returned to Fort Monroe. There is no more promising officer in the Service than Mr. Hawthorne. A thorough soldier, a readable and ambitious writer, an insatiable reader and a finished gentleman, his native town of Newport, Ky., is justly proud of him.

CAPT. S. W. GROSSBECK, U. S. A., returned to St. Paul this week from a brief trip East.

GENERAL HENRY PRINCE, U. S. A., visiting in Europe, is at 61 Ave. de Friedland, Paris.

ASSIST. SURGEON C. B. EWING, U. S. A., of Fort Lewis, Col., is visiting friends in the East.

CAPTAIN S. L. WOODWARD, 10th Cavalry, on leave from Fort Verde, Ariz., is visiting relatives at Paducah, Ky.

COLONEL T. L. CRITTENDEN, U. S. A., retired, has changed his residence from Annadale, S. I., N. Y., to Sea Side, N. Y.

2d LIEUT. F. V. KING, 8th Inf., on leave from Fort Niagara, N. Y., is stopping at 146 N. 10th street, Philadelphia, Pa.

CAPTAIN C. B. WESTERN, 14th Infantry, on leave from Vancouver Bks., W. T., is at the Sturtevant House, N. Y. City.

LIEUTENANT O. E. WOOD, 5th U. S. Artillery, rejoined at Fort Monroe, Va., this week from a short visit to New York City.

COLONEL DUNN PIATT, the famous Postmaster at Mac-a-cheek, O., is at the St. Nicholas, says the Cincinnati Commercial-Gazette.

LIEUTENANT-COLONEL J. S. POLAND, 21st U. S. Inf., on sick leave and lately at Hot Springs, Ark., was in San Francisco last week.

LIEUTENANT W. W. TYLER, 13th U. S. Infantry, stationed at Fort Leavenworth, has been ordered before the Retiring Board sitting there.

LIEUTENANT M. P. MAUS, 1st U. S. Inf., is second on the list of sharpshooters in the Department of California for 1887, with a total score of 552.

COLONEL DANIEL MCCLURE is in Washington this week interviewing his Congressional friends in regard to the measures pending in the two Houses for his relief.

COLONEL T. C. SULLIVAN, U. S. A., lately on duty at Boston and now at St. Paul, has been transferred from the Massachusetts Commandery to the Minnesota Commandery, Loyal Legion.

CAPTAIN LOUIS S. TESSON, Assistant Surgeon, U. S. A., after a brief but pleasant tour of duty at Chicago, will shortly go to West Troy to take charge of medical matters at Watervliet Arsenal.

GENERAL BRAGG, ex-Chairman of the House Committee on Military Affairs, called at the capital Jan. 5 to pay his respects to his old colleagues in the House and on the Committee. He expects the appointment of U. S. Minister to Mexico.

COLONEL BATCHELLER has secured from the War Department fifty-nine guns of the style and calibre used at the battle of Gettysburg, with which to mark on the field permanently the positions occupied by the fifty-nine batteries engaged.

The death at San Antonio, Jan. 2, of Col. Alex. Chambers, 17th U. S. Inf., promotes Lieut.-Col. H. R. Mizner, of the 10th, to Colonel of the 17th; Maj. Simon Snyder, 5th, to Lieut.-Colonel of the 10th; Capt. E. C. Woodruff, 12th, to Major, 5th; 1st Lieut. L. Haskell, 12th, to Captain, and 2d Lieut. C. W. Abbott, Jr., 12th, to 1st Lieutenant.

JUDGE MARTIN J. CRAWFORD, of the Supreme Court of Georgia, has a son who is an enlisted man in the 12th U. S. Infantry. He is ambitious and his friends count confidently upon his advancement. He is also a nephew of Gen. S. W. Crawford, U. S. Army. There are a good deal worse possibilities than those which attend the position of an enlisted man in our Army.

Among the holiday presents received by President Cleveland was a large sized imperial photograph of the late Captain Samuel Chester Reid, who commanded the celebrated brig-of-war *General Armstrong* at the memorable battle of Fayal, in 1814, and who also designed the present form of the United States flag, as adopted by Congress in 1818. The photograph was presented by the son of the gallant hero, Col. Sam. C. Reid of Washington.

The official invitations to Army and Navy officers to attend the diplomatic reception on Jan. 12 have been distributed. A Washington despatch reports that officers complain that the diplomatic corps send but a very small representation to the receptions tendered them, and several of them have determined to no longer act as lay figures to display gorgeous uniforms at diplomatic receptions until the diplomats see fit to return the courtesies shown them by the Army and Navy.

LIEUTENANT G. P. BORDEN, 5th U. S. Inf., who recently closed up his recruiting rendezvous at Denver, Col., and went to Columbus Barracks was, before leaving the former place, tendered a parting and exceedingly pleasant ovation by his friends. Lieut. Steele and Smoke, of Post Sheridan, Lieut. Borden, says a local paper, has made many friends during his stay, and his departure will cause regret among them. The testimonial was in the shape of a box party at the Tabor, where Miss Olcott is presenting "Theodora." After the play a complimentary banquet was tendered Lieut. Borden at Nelson's by Lieuts. Steele and Smoke.

The Third Presbyterian Church, Trenton, N. J., was the scene, Jan. 10, of a brilliant wedding, the bride being Miss Louise Scudder, daughter of Judge Edward W. Scudder, of the New Jersey Supreme Court, and the groom Capt. Henry Pratt Perrine, 6th U. S. Cavalry, eldest son of Q. M. Gen. Perrine, of New Jersey. The ushers were Capt. Richard A. Williams, 8th Cav.; Lieut. Henry C. Hodges, Jr., 2d Inf., and Capt. Wm. A. Rafferty and Geo. S. Anderson, 6th Cav., the regiment to which the groom belongs. The bridesmaids were the Misses E. Stephens, Annie Bell, Helen Green and Rita McIlvaine, of Trenton. The bride was dressed in a white moire, en train, trimmed with pearls. She wore orange flowers and a veil and carried a bouquet of white roses. Her ornaments were diamonds. The bride and groom were preceded to the altar by two children carrying baskets of yellow roses. The guests comprised the leading society people of the State, the Bench and Bar being well represented. A reception followed the ceremony.

CAPTAIN A. MORRIS, U. S. A., retired, has left N. Y. City for Aiken, S. C.

MAJOR D. R. LARNED, Pay Dept., has arrived in Washington from San Francisco, Cal.

1st LIEUT. C. MCCLURE, 18th Inf., on leave from Fort Riley, Kas., is at Carlinville, Ill.

1st LIEUT. A. R. PAXTON, 15th Inf., lately on leave in Leesburg, Va., is now in Albany, N. Y.

CAPTAIN W. H. BOYLE, 21st Inf., lately on leave in N. Y. City, has rejoined at Fort Sidney, Neb.

MR. CHAS. G. TEAR, who resigned from the 25th U. S. Infantry Jan. 5, is at Duluth, Minnesota.

2d LIEUT. E. P. LAWTON, 18th, has returned from his European trip, and is now at Savannah, Georgia.

LIEUTENANT F. W. KINGSBURY, 2d U. S. Cav., has rejoined at Fort Walla Walla from a visit to Vancouver Barracks.

1st LIEUT. F. W. MANSFIELD, 11th Inf., has gone from Morrow, O., to San Francisco, Cal. He is registered at the Palace Hotel.

CAPTAIN E. J. STRANG, U. S. A., retired, has arrived at New Orleans, La., from Iselin, N. J. His address is 500 N. Rampart street.

2d LIEUT. G. H. CAMERON, 7th Cav., has returned to his station at Fort Riley, from Chicago, Ill., where he has been spending a short leave.

CHAPLAIN WINFIELD SCOTT and Asst. Surgeons W. E. Hopkins, W. P. Kendall and A. S. Polhemus are on the list of California marksmen for 1887.

CAPTAIN H. C. MORGAN, U. S. A., retired, is registered at the United States Hotel, Hartford, Ct., where he will probably remain during the winter.

MAJOR B. P. RUNKLE, U. S. A., retired, has left Cincinnati, O., for New Orleans La., where he will remain during the winter. He is stopping at the Hotel Royal.

CAPTAIN G. S. ANDERSON, 6th U. S. Cav., of Fort Myer, Va., visited friends in New York early in the week on his way to Trenton, N. J., to attend the wedding of Capt. H. P. Perrine, same regiment.

COLONELS EDWARD HATCH and H. A. MORROW, U. S. A., arrived in Omaha this week to sit upon the Board called together by General Crook to prepare a detailed plan for field instruction during next summer.

The winter breezes are telling very severely on the old retired officers of the Army. In a very short space of time four of the oldest, Generals Morrison, Emory, Alexander and Seawell, have entered death's door.

LIEUTENANT W. O. CORY, 15th U. S. Inf., gave a party, Jan. 7, at the National Hotel, Leavenworth, to a number of friends in honor of his birthday anniversary. The party numbered 15 persons: Lieut. Cory, 15th Inf.; Captains MacArthur, 13th Inf., Moore, 9th Cav., and Hamner, 20th Inf.; Lieutenants Cook, 15th Inf.; Irons, 20th Inf.; Baker, 7th Inf.; Finley, 9th Cav.; Townsend, 6th Inf.; McDonald, 1st Cav.; Byron, 6th Inf.; Taylor, 2d Art.; Chaplain Barry, Dr. LeMay and Mr. Henry Shindler.

The Korean Embassy arrived in Washington Jan. 9, and are quartered at the Ebbitt House, where they will remain until a residence for their accommodation has been secured. Dr. Allen, the foreign secretary of the Embassy, said that a very friendly feeling towards America had grown up in Corea. China, he said, was bitterly opposed to Corea establishing legations abroad, and did not like the progress Corea was making in civilization, nor the independent stand she had taken towards the Celestial Empire.

The grave of Gen. Joseph Lane is in the Umpqua Valley, a mile from the hamlet of Roseburg, Oregon. Conspicuous in military life for many years, and in 1890 occupying the second place on the Presidential ticket with John C. Breckinridge at the head, he occupies a lonely grave in the green valley over which Mt. Hood stands sentinel. His wife lies by his side. The mausoleum is neat and plain. Several of his sons live in Douglas County, Oregon. One of his sons, the Hon. Lafayette Lane, represented the State some years ago in Congress. He is now, as then, a lawyer in Roseburg.

A PROMINENT Army officer who attended the President's reception on New Year's Day, said to the *Tribune* correspondent: "Have you ever reflected upon the absurdity of the arrangements at the White House receptions by which guests are compelled to leave their wraps in the bedrooms? Don't you think the American Government should be able to afford a cloak-room at the Executive Mansion where guests could leave their hats, coats, etc.? Does it not suggest to you a country wedding or apple-paring, where those invited are compelled, for want of space, to utilize the 'spare bed' as a hat-rack?"

DR. ELLIOTT COUES, Washington's noted scientist and theosophist, has been interviewed about the Hodgson exposure of Mme. Blavatsky. Incidentally he gives a Chicago experience. "As to the projection of the double or the appearance of the astral form far away from where the body is, I know that to be true. I can do it myself. I have attained that power and have many times projected my astral form. The 23d of June I was in Chicago at a reception given in my honor by my sister, Mrs. J. M. Flower, of Chicago. On that occasion I projected my double and called on and talked with an accomplished lady in Washington, who possesses great psychic powers. This is her own account of the visit: . . . You have paid me three astral visits during the last six months, and I will state the circumstances now." This she proceeds to do, stating circumstances which but for the credit she receives for psychic power, would make one question as to which of two classes she belongs, the women who can never see things as they are, or those who can never tell the truth about what they do see. Her story suggests the query whether some of Dr. Coues's domestic experiences are not to be explained by his unfortunate capacity for multiplying himself, and whether it was himself or his astral double which was recently married in Boston.



2d LIEUT. H. J. GALLAGHER, 6th Cav., lately at Council Bluffs, Ia., on leave, has joined at Fort Lewis, Col.

CAPTAIN J. AUGER, 5th Cav., who has been at Washington on leave for some weeks, has joined at Fort Supply, I. T.

COLONEL A. DOUBLEDAY, U. S. A., retired, has come into New York from Mendham, N. J., and is stopping at 29 W. 17th street.

2d LIEUT. J. M. CARSON, 5th Cav., who has been East for the past month on his wedding tour, is en route to his station at Fort Reno, Ind. Ter.

LIEUTENANT WALTER MCFARLAND, 16th U. S. Inf., under recent orders from A. G. O., changes base from Fort Davis to San Antonio, Texas.

LIEUTENANTS R. B. TURNER and E. F. Taggart, 6th U. S. Inf., were expected in Chicago this week for a tour of duty at the camp at Highwood.

MAJOR-GENERAL SCHOFIELD and Lieut. Sawyer, A. D. C., who have been on a short trip to Florida, were expected to return to Governor's Island this week.

MRS. SHERIDAN, wife of Lieut.-General Sheridan, received the guests on Monday evening at the first german of the season of the Bachelors' Club, of Washington, D. C.

LIEUTENANT A. R. PAXTON, 15th U. S. Inf., lately at Leesburg, Va., on leave, soon goes to Albany, N. Y., for recruiting duty to assist Capt. J. B. Rodman, 20th U. S. Inf.

ASST. SURG. A. H. APPEL, U. S. A., has returned from Montreal, Can., where he has been spending a portion of his leave, and taken station at Highwood, near Chicago, Ill.

THE veteran General Philip St. George Cooke, U. S. A., visited New York City this week, locating at the Windsor Hotel. He sailed for Bermuda on Thursday in the *Orinoco*.

ADVICES from St. Augustine state that Gen. R. B. Ayres, U. S. A., is seriously ill with congestion of the liver, and Major J. V. D. Middleton, the Post surgeon, ill with intermittent fever.

THE physicians at the Sanitarium at Danville, N. Y., who made a post mortem examination of the late Capt. Bethel M. Custer, 24th U. S. Inf., have expressed the unanimous opinion that death was due to long service in a malarious district.

LIEUTENANT J. H. MCRAE, 3d U. S. Inf., and bride, of Fort Shaw, Montana, have been visiting at Macon, Ga. Lieut. McRae is one of Georgia's representatives in the Army, and he and his wife were warmly welcomed and entertained during their stay.

1st LIEUTENANT S. W. FOUNTAIN, 8th Cavalry, and Miss Katharine G. McGrath, were married at the Cathedral, Philadelphia, Pa., Jan. 11. Miss McGrath is the daughter of the late Wm. V. McGrath, of Philadelphia.

THE *New York Mail and Express*, while expressing regret at the illness of Major-General Terry, hopes that in case of his retirement for disability, President Cleveland "will recognize the merits of a deserving officer and name General Crook as the next Major-General."

THE detail of officers for the Selfridge Court martial has not been fully determined upon, nor will it be, probably, until shortly before the Court meets. The *Omaha*, now on the way to Panama, will bring all of the witnesses to this country, and, of course, the Court will not be held until sometime after her arrival at that port.

LIEUTENANT JOHN P. WISSER, 1st Artillery, read his paper on "Practical Instruction of Officers at Posts" before the Military Service Institution, at Governor's Island, on Thursday evening. There was a good attendance and the practical subject was handled skillfully and instructively by its author. Lieut. Wisser explained the Austrian system of instruction of post officers in detail, and advocated a somewhat similar system, necessarily modified by the requirements of our Army, for the post officers of the United States Army, in order that they may become versed in the practical application of minor tactics, and that the younger officers may have the benefit of the experience of their superiors. The main features of the system are in the winter lectures upon and the solution of problems in minor tactics indoors, and in the summer the solution of problems in the open.

GRAVE rumors were afloat early in the week as to the serious illness of Major-Gen. A. H. Terry, U. S. A., at present on leave for a few months, statements that it was his intention to retire, etc. We are glad to learn, however, that while he is not well, he is by no means as ill as reported. The following about expresses the exact condition of the case: Owing to the severe changes of temperature which attend Chicago winters Gen. Terry's physicians advised him to spend the winter in Florida, where the warmer and drier climate will be less trying to the ailment from which he is suffering, and he is resting in New York for a few days only. He is able to go about, and the rumors reporting him as seriously ill have no foundation. Gen. Terry expects to resume his journey to Florida next Monday. A despatch of Jan. 9 from Chicago says: "Maj. Myrick, Gen. Terry's aide-de-camp, said to-night that the General is suffering from kidney disease, but his condition is not so serious as to make his retirement from the Service necessary, and he has not asked to be relieved." Col. H. C. Corbin, U. S. A., is reported as saying: "I do not think Gen. Terry is in any immediate danger, but I fear his disease will ultimately prove fatal. I should say he is in about the same condition as Secretary Manning was for a long time." A Chicago despatch of Jan. 12 states that the true cause of Gen. Terry's illness is lack of accustomed exercise, overwork, and sewer gas. One day last spring his office was newly painted, and he worked for ten hours in an atmosphere laden with the odor. He was paint-poisoned, and was ill. The rupture of a sewer or main in the cellar of his residence immediately after, intensified and aggravated his illness. He has not been well since he came to Chicago.

CAPTAIN F. M. LYNDE, U. S. A., has gone from his home in Philadelphia to Pensacola, Fla., for the winter.

DR. PHILIP CROSS, formerly a surgeon in the 53d Regiment, British Army, was hanged at Cork, Ireland, Jan. 10, for the murder of his wife by poisoning.

THE following officers registered at the Navy Department the past week: Comdr. J. J. Read, Rear Admiral T. S. Phelps, P. A. Paymaster J. N. Speil, Comdr. C. M. Chester, Lieut. Harry Knox and Asst. Engr. H. T. Cleaver.

THE Association of Union Ex Prisoners of War, held its annual meeting in New York City on Wednesday evening. Gen. Alexander Shaler was re-elected President, Thomas W. Jones Vice President, Frederick A. Rowe Secretary, George W. Farr Treasurer, and the Rev. David H. Hauneberg, Chaplain.

WILLIAM WALDORF ASTOR has inherited from his mother, the late Mrs. J. J. Astor, her villa and nine acres at Newport. The house was built about 20 years ago by Francis L. Barreda, then Peruvian Minister to the United States, who sold it to the late Wm. T. Blodgett, of New York, for \$350,000. When Mr. Blodgett's estate was settled his executors sold it to Mrs. Astor for \$201,000.

A NUMBER of gentlemen met on Wednesday evening at the rooms of Col. Thos. C. Miles, "The Broadway," cor. 40th st., N. Y. City to consider the subject of reviving the extinct Army and Navy Club, or organizing a club to be called the United Service. This last is the better plan, for the more distinctly the projectors of this enterprise can separate the new club from the old one of incompetent management and unfortunate memory the better.

THE apparent hitch in nominations for promotion of Asst. Paymasters of the Navy comes from the delay in the examination of Asst. Paymaster Doyle. This officer was ordered to the United States from the *Iroquois* in May last, but his examination has been postponed from time to time for various reasons. Of course while an officer's status is uncertain, no confirmations can be made, endless confusion following an opposite course.

ASST. SURG. J. Y. PORTER, U. S. A., says the *Tampa Journal*, is due a debt of gratitude for valuable and timely help rendered our city and people during the epidemic. He came as a volunteer, and it was through his influence at Washington that funds and nurses were secured for the hospital. For some time a false impression existed among our people that Dr. Porter was receiving compensation from the Government for services rendered here, but such is not the case.

It is reported that the Rev. Maurice O'Shea, whose appointment as chaplain in the Army, was withdrawn after it had been made and accepted, intends to contest his right to the position. Had he not returned the appointment when requested to do so he would undoubtedly have had a good claim for the place. Army lawyers contend that the President would have been utterly powerless to deprive him of the office unless the Senate should sustain the President by confirming some other nominee.

THE money left by the miser James H. Paine, some \$600,000, is to go to his relatives in Boston. For many years Paine was a well-known figure in New York, and there was scarcely a musical entertainment given in that city for the past quarter of a century that he did not attend. As far as his clothes went he looked like a tramp, and he was very dirty in his person, but his face was rather fine, and if he had held himself up to his full height, he would have been aristocratic-looking. He was a grandson of Robert Treat Paine, one of the signers of the Declaration of Independence, and his family are among the wealthiest and most respectable of Boston's citizens.

THE wife of Eugene Clemenceau, the French journalist and politician, is the daughter of a wealthy New York merchant. Clemenceau met her when he was eking out a small income by teaching French in New York. At first the father objected, but when he found that the lovers were determined, and that there was nothing against the young man, he relented. The match proved a happy one, and Clemenceau's fondness for the American nation is probably due as much to the fact that his wife is an American as to his admiration for its institutions. This much-talked-of Frenchman is rather small, but his bright black eyes and close cropped gray hair give him a fierceness of appearance that his ready smile does much to soften.

THE marriage of Ensign Ernest Wilkinson, U. S. Navy, to Miss Gullie Bostic will take place in a few days.

NAVAL CONST' R W. H. VARNEY has returned to Philadelphia from his visit to Norfolk, Va., to inspect the *Galena*.

COMMANDERS R. D. EVANS and J. J. Read, U. S. Navy, registered at the St. James Hotel, New York City, on Tuesday.

REAR ADMIRAL JOHN H. UPSHUR, U. S. N., registered at the Clarendon Hotel, New York, on Monday of this week.

CAPT. R. S. COLLUM, U. S. Marine Corps, read his paper on "The Story of a Great Crime," on Wednesday, before the United Service Club of Philadelphia.

COMMANDER ALLAN D. BROWN, U. S. N., read a paper on "The Electric Distribution of Time," on Friday of this week, before the Franklin Institute of Philadelphia.

CAPT. C. F. HOOPER, of the revenue cutter *Thomas Corwin*, was presented recently with a unique clock at the Baldwin Hotel, San Francisco. Judge Levy made the presentation speech.

LIEUT. W. H. MAXWELL, U. S. N., who went on the *Hondo* with the party who are to make the final survey and location of the Nicaragua Canal route, was at last accounts at Greytown, surveying the harbor there.

ENSIGN JOHN M. Poyer, U. S. N., who has been attached to the training ship *Saratoga*, and who has made many warm friends here, has been detached, and will leave for the North in a day or two, much to the regret of his friends.—*Norfolk Landmark*.

ADMIRAL VIGNES, of the French Navy, when recently in Philadelphia, gladdened many hearts by giving the recipe for the making of the delicious entree of eggs which formed a feature of the dejeuner to the Mayor on board the French man-of-war.

MISS EMILY LEWIS, sister of Chaplain John K. Lewis, U. S. Navy, committed suicide by drowning at Dayton, O., Jan. 9. Chaplain Lewis was at home at the time of the occurrence. A year or two ago a violent sunstroke and a protracted illness produced in Miss Lewis a mental distress that had for some time alarmed her friends.

It is a noticeable fact that in the recent nominations sent to the Senate of assistant surgeons, U. S. N., such a large proportion of the whole should be from the Southern States. Three, Drs. Field, Harris, and Pickrell, are from Virginia; a fourth, Dr. White, is from Maryland, while but two are from the so-called Northern States, Dr. Crandall, from New York, and Dr. Webster, from Pennsylvania. Three of these officers have been in the Service more than six months, or since May and June.

Mrs. C. T. HUTCHINS, wife of Lieut.-Comdr. C. T. Hutchins, U. S. N., will sail with her young son, Master Thomas Hutchins, Feb. 1, on the North German Lloyd steamer *Saale*, for an extended tour abroad. Mrs. Hutchins will be accompanied by her sisters, Mrs. Hartley and Mrs. Simpson, widow of the late Gen. J. H. Simpson, U. S. Engineer Corps. Mrs. Simpson will be accompanied by her son and youngest daughter, and will reside during her stay in Berlin with her sisters.

COLONEL THOMAS F. BARR, Assistant Judge Advocate General, is in Washington this week on business with the Secretary of War and Adjutant General of the Army in connection with the preparation of the report on the recent inspection of the Fort Leavenworth Military Prison. His presence in the city started the gossip to talking about his relieving Major Gardiner as the legal member of the Secretary's staff. Col. Barr disclaims any knowledge on the subject and does not expect any such assignment at present.

A NEW YORK *Tribune* gossipier says: "It is rather unusual to find upon the piazza of one hotel a batch of five United States Admirals. There are five of them stopping at the Spring house, and a noble-looking set of men they are. Admiral Leroy, the senior of his comrades, is a gentleman of the old school, scrupulously polite and circumspect. It is said, though the story is most likely apocryphal, that when he was in command of the Mediterranean Squadron, a French Admiral came aboard his flagship to pay his respects to the American commander, and that the two officers were so profoundly polite to each other that they bowed themselves off the gangway and overboard. Admiral Almy is a regular old sea dog. They call him 'Jack Bunsby' in the Service and he looks just like the hardy old fellows that Dickens and Capt. Marryat used to write about. When he coughs it sounds like a fine old hurricane."

ARNOLD G. HARRIS, who died in Buffalo, N. Y., Jan. 6, was a famous Union spy during the war. He went out from Buffalo with the 21st New York regiment, and was detailed to command a gunboat on the James River. He entered the rebel lines as a Union spy and remained several weeks, securing full plans of the enemy's works. He was in command of the famous yacht *Wanderer*, which vessel attempted to run the blockade at Charleston, with George N. Sanders and important despatches for the European agents of the rebels on board. He saved the despatches for the Union commander by duplicating the can containing them and throwing the duplicate overboard. Then the *Wanderer* was "accidentally" steered into the face of the Northern blockaders, and Saunders, Harris and others were safely landed with all their chattels, including the rebel despatches.

GEN. HERMANN KANZLER, who died in Rome, Jan. 6, entered the Pontifical Army in 1845, and was advanced for bravery until he was made General by Lamarmora after his audacious march from Pesaro to Ancona, when with 500 men he pierced the Piedmontese Army which surrounded him. In 1845 he was made Commander-in-Chief of the army. After the retreat of the French troops from Rome he endeavored to defend that city against the royal army, but finally signed the capitulation. He continued to live at the Vatican until the death of Pius IX., when he was retired.

MR. LA FAYETTE CARRINGTON, who died recently at his home near Milledgeville, Ga., aged 65, was the father of Lieut. Frank de L. Carrington, 1st U. S. Inf., and Asst. Surg. P. M. Carrington, U. S. Marine Hospital Corps. The deceased gentleman leaves a widow and a large family to mourn his loss.

MRS. SOPHIE DU PONT, widow of the late Rear Admiral Samuel F. Du Pont, U. S. Navy, died Jan. 9, 1888, at her home in Wilmington, Del., after a brief illness. She was 79 years old. Her death will be mourned by a large circle of relatives and friends.

JOSEPH A. BAULIER, Jr., son of the veteran Capt. "Joe" Baulier, of the Quartermaster's steamer *Chester A. Arthur*, plying in New York Harbor, died Jan. 10 in the 21st year of his age.

MRS. ELEANOR WHISLER, mother of Private Wm. Whisler, Co. F, 9th U. S. Inf., who died on the Greely Arctic Expedition, died suddenly at Delphi, Ind., Jan. 1.

NORBOURNE LEAVY, only son of Capt. J. T. Leavy, retired, died at Harper's Ferry, Va., Jan. 4th, aged nine years.

MRS. BIDWELL, mother of Lieut. W. P. Newcomb, 5th U. S. Art., died at East Hartford, Conn., Dec. 30, 1887.

JAMES McDERMOTT, a veteran of the War of 1812, died at Washington, Pa., Jan. 10, aged 90.

A SISTER of Brevet Maj. Gen. Wm. D. Whipple, U. S. A., died last week in Chicago.



## THE FIFTIETH CONGRESS.

This session of Congress bids fair to be a lively one, though not especially so to the Army and Navy, as the debates and discussions will be devoted mainly to the subject of the tariff and other matters in which politics largely enters. Still there are many Army and Navy questions to be agitated, and whether productive of any good results or not, our reports of Congressional proceedings will be no less interesting this year than formerly.

It will be observed that our predictions in regard to the chairmanship of the two Service committees are fulfilled. It is to be regretted that General Wheeler is not on the Military Committee. He was left off at his own request, which he made after it was learned that Mr. Townsend had been selected for the chairmanship. Of the fourteen members of the new committee only four, all Republicans—Steele, Laird, Cuthbertson and Carey—were on last year's committee. Seven of the thirteen members of the House Committee on Naval Affairs served on that committee last year, the new members being Messrs. Whitthorne, Rush, Cochran, Elliot, Abbott and Hayden.

The chief work accomplished during the week has been that performed by the committees. Bills continue to pour into both Houses, and until some of them reach the calendars through reports from committees much of the time of both Houses will be taken up in speech making and debates upon matters that amount to nothing in the end. At the meeting of the Senate Committee on Military Affairs on Tuesday the Manderson three battalion bill was one of the first to receive consideration. All the members being familiar with its provisions, Mr. Manderson was directed to report it to the Senate, with an unanimous recommendation for its passage. Last year's report was adopted. A favorable report was also unanimously adopted upon the bill to amend Article of War so as to clearly define its meaning as to desertion. A number of private bills, including one for the relief of Capt. Robt. H. Montgomery, received favorable action. The pending Army nominations were not finally acted upon.

The Senate Committee on Naval Affairs held its first meeting of the session on Jan. 11. All the members were present. The pending nominations all received favorable consideration except that of Asst. Paymaster Leeds C. Kerr, which is held up in consequence of a protest from Assistant Paymasters Cowie and Williams, who contend that they did not get their proper numbers on the Register at the time of their appointments. A printed brief by the father of Asst. Paymaster Cowie, as attorney for the two officers, has been filed with the committee, asking that they be placed in the order in which they were nominated to the Senate and confirmed. The Navy Department has been asked for information.

Beyond the reference of the following bills to sub-committees no other business was transacted: The bill to increase the efficiency of the Medical Corps—to Messrs. Hale, McPherson and Chandler; bounty to American built vessels—to the full committee; prescribing tests for anchors, etc.—to full committee; to relieve certain enlisted men of the Navy and Marine Corps from the charge of desertion—to Mr. Stanford; increasing the pay of Assistant Naval Astronomers, retirement of mates and relief of sufferers by sinking of the *Tallapoosa*—to Chandler; retirement of certain officers of the Navy after 20 years' service—to Hale; to increase the pay of ensigns—to McPherson; awarding badges to members of the Greely Relief Expedition—to Riddleberger; establishment of a Navy-yard on the Pacific coast—to Hale.

The House Committee on Military Affairs has held several sessions since its appointment, and is now well organized to cope with the large amount of work that will come before it. Mr. George B. Parsons, editor and proprietor of the *Shawneetown*, Ill., *Gallatin Democrat*, has been appointed clerk of the committee. The following sub-committees have been announced by the chairman:

Army Appropriation Bill—Messrs. Townsend, Hooker, Marsh, Steele and Laird. Military Academy Appropriation Bill—Messrs. Tiltman, Robertson, Yoder, Cuthbertson and Gear. Army Organization—Messrs. Hooker, Tiltman, Ford, Steele and Carey. Soldiers' Homes, National Cemeteries, Barracks, Arsenals and Reservations—Messrs. Marsh, Ford, Yoder, Laird and Fitch. Public Defence and Armament—Messrs. Spinola, Townsend, Ford, Cuthbertson and Fitch. Muster, Bounty, Arrears of Pay, and Desertion—Messrs. Robertson, Yoder, Spinola, Gear and Carey.

The House Committee on Naval Affairs has organized into the following sub-committees, each of which will get to work as soon as the numerous bills introduced have been printed and forwarded to the committee: On Rank, Pay and Pay Miscellaneous—Messrs. Wise, Whitthorne, Abbott, Goff and Boutelle; On Ordnance and Navy-yards—Messrs. McAdoo, Elliott, Rush, Boutelle and Harmer; On Construction and Repair and Steam Engineering—Messrs. Whitthorne, Cockran, Wise, Herbert, Thomas and Goff; Naval Academy and Marine Corps—Rush, Elliott, Cockran, Farmer and Boutelle; Navigation Supplies, Equipment and Recruiting and Miscellaneous—Messrs. Cockran, Elliott, Rush, Hayden and Goff; On Appropriation for the Naval Establishment—Messrs. Herbert, McAdoo, Abbott, Thomas and Harmer.

Petitions were presented in the Senate this week: From the Board of Trade of Cleveland, O., favoring the establishment of a naval reserve on the lakes. From the widow of Lieut. Col. N. H. McLean, for pay due her husband. From Legislature of Nebraska, in favor of giving a silver medal to veterans of late war.

Petitions were presented in the House: From watchman Dept. Building, for increase of pay from \$720 to \$900 per annum. From widow of Paymaster John Van B. Bleeker, for increase of pension. From civilian employees of navy yards, for increase of pay. From Dr. S. T. Weirick, for increase of pay of contract surgeons in the U. S. Army.

Communications were presented in the House this week: Transmitting urgency deficiency estimates for the construction of officers' quarters at the Mare Island, Cal., Navy-yard; for dredging and protection wall at League Island Yard; for an increase in force for the Department Building; transmitting with financial statement a report of the

Mississippi River Commission; report of Board of Managers of National Volunteer Home.

A wilderness of pension bills is before Congress. Those introduced in the House alone would, if enacted, consume an annual surplus of more than \$100,000,000 for a hundred years to come.

## BILLS INTRODUCED—SENATE.

S. 1226, Dawes. To appoint and retire John N. Quackenbush as a commander in the Navy.

S. 1232, Voorhees. That Thomas G. Corbin, now a captain on the retired list of the Navy, be considered as having remained upon the active list of the Navy next after J. W. A. Nicholson, and as having passed through the various grades through which he would have passed had he so remained on the active list and been promoted according to seniority and retired as a rear admiral upon reaching the age of 62 years; and that in computing the benefits which he shall receive under this act he shall be considered as having been upon leave or waiting orders until the date when he would have been so retired.

S. 1247, Manderson. Authorizes the Secretary of War to furnish the Governors of States with copies of the records of troops from their States who were engaged in the late war.

S. 1248, Manderson. That the Subsistence Department of the Army shall consist of one Commissary-General of Subsistence, with the rank, pay and emoluments of brigadier-general; 3 assistant commissaries general of subsistence, with those of colonel; 6 assistant commissaries general of subsistence, with those of lieutenant-colonel; 8 commissaries, with those of major, and 8 with those of captain of cavalry: *Provided*, That the vacancies created by this act shall be filled by the promotion by seniority of the officers now in the Subsistence Department.

S. 1249, Manderson. That to provide, as far as may be practicable, for the monthly payment of the Army, instead of bi-monthly as heretofore authorized by law, the aggregate number of officers of the Pay Department of the Army be, and is hereby fixed at 48, and that the three majors longest in continuous service in the Pay Department and not less than 25 years, be promoted to the rank and grade of deputy paymaster-generals, from the date of this act, and the number in said grade is hereby increased accordingly.

S. 1270, McPherson. That from and after the passage of this act any officer of the Navy of the United States of the line or staff who has been promoted for eminent and conspicuous conduct in battle, or extraordinary heroism under the provisions of the act approved Jan. 24, 1865, R. S., Sec. 1536, may hereafter be placed on the retired list of the Navy, with the rank and sea pay of his grade; but no officer shall be retired under this act except upon his own application.

S. 1274, Hiscock (by request). To issue an honorable discharge "to Wm. Galloway, late Captain, 15th Regiment, U. S. A., from the date of his cashiering, Aug. 15, 1867."

S. 1302, Teller. Granting the right of way to the Denver and Rio Grande R. R. Co. across the U. S. military reservation for the cantonment on the Uncompahgre.

S. 1333, Manderson. Whereas section 1209 Rev. Stat. has been in practice virtually abrogated by the Senate of the United States in refusing to confirm nominations for brevet promotions on the ground that warfare against Indian tribes does not come within the meaning of the section quoted; and whereas many officers of the Regular Army of the United States, and who are still in active service, greatly distinguished themselves in Indian battles, where the large percentage of loss sustained gave evidence of the danger attendant upon such duty; and whereas the esprit du corps of both officers and enlisted men of the Army would be advanced by some public recognition of their heroism and devotion: *Therefore, Be it enacted, etc.*, That section 1209, Rev. Stat., shall, on and after the passage of this act, be made applicable to every officer of the Army below the actual rank of brigadier-general, and who has not been previously brevetted to that rank, and who may be recommended by the commanding officer of the expedition for brevet promotion to the grade next above that in which he is actually commissioned, on account of heroic conduct in battle against hostile Indians, either on or outside of the territory of the United States.

Sec. 2. That the foregoing section shall comprehend every officer of the Army still on the active list who has particularly distinguished himself in action with Indians since the abrogation of the brevet privilege: *Provided*, however, That his brevet commission, when issued, shall bear date only from the passage of this act: *And provided further*, That the date of the particular heroic act for which he is promoted shall appear in his commission.

Sec. 3. That brevet rank shall be considered strictly honorary, and shall confer no privilege of precedence or command not already provided for in the statutes which embody the rules and articles governing the Army of the United States.

Sec. 4. That non-commissioned officers and privates of the Army who, on and after the passage of this act, may distinguish themselves by extraordinary bravery in Indian battles, shall, on recommendation of their ranking commanding officer present in the field, be entitled to the maximum of pay allowed for length of service in their respective grades; and further, shall be entitled to compete for commissions in the Army before a board of officers, when, if they should pass a successful examination, they shall be considered in the line of promotion next after the cadets who have graduated at the United States Military Academy.

S. 1369, Cameron. Giving Commodore Joseph B. Hull, U. S. N., 75 per centum of sea pay of commodore.

S. 1370, Cameron. To place the name of Asst. Engineer H. D. Potts, U. S. N., on the retired list of the Navy "for disabilities incurred in the line of duty from sickness or exposure therein."

S. 1379, Dolph. The pay of Chaplains, U. S. A., shall be \$1,800 per annum, with forage for one horse, provided that hereafter no chaplain shall be appointed who is over 30 years of age and not in good bodily health.

## BILLS INTRODUCED—HOUSE.

H. R. 1234, McKenna. To amend the laws governing the militia of the U. S. (See heading of State troops.)

H. R. 1237, Morrow. Appropriating \$175,000 for repairs to U. S. S. *Hartford*.

H. R. 1238, Morrow. Appropriates \$1,125,000 for the building, equipping and arming of three composite bark rigged steam vessels for the training service of the United States Navy, of about 300 tons displacement, designed for a speed of at least 12 knots an hour, engines having all modern appliances, and costing complete, rigging, sails and armament included, not more than \$375,000, each one when completed to be stationed on the Pacific Coast and attached to a station for the training of naval apprentices hereby authorized to be established by the Secretary of the Navy at Mare Island, Cal. All material to be of domestic manufacture, and no change to be made in plans when once adopted and contract made, an amount exceeding \$500 without consent of the Department, and an appraisal of the actual cost of such charges by a board of naval officers. Completion of the work within the prescribed period to be secured by penalties, the contract being let "to the lowest and best responsible bidder or bidders."

Sec. 5. In making proposals for contracts for building the vessels authorized to be constructed under this act, it shall be required that one of such vessels shall be built on or near the coast of the Pacific Ocean, or the waters connecting therewith. If it shall appear to the satisfaction of the President of the United States from the bidding for said con-

tracts, when the same are opened and examined by him, that said vessel cannot be constructed at a fair cost on or near the coast of the Pacific Ocean, he shall authorize the construction of said vessel elsewhere in the United States.

H. R. 1260, Symes. Appropriating \$250,000 for a branch home for volunteer soldiers in either Iowa, Minnesota, Nebraska, Dakota or Colorado.

H. R. 1261, Symes. Appropriating \$100,000 for the erection of an Army and Navy Hospital at Poncha Springs, Colorado.

H. R. 1262, Symes. Granting right of way for railroad purposes through Fort Crawford military reservation.

H. R. 1299, Payson. Granting 160 acres of land to every person entering the service of his country during the late civil war, either in the Army and Navy, and who served six months or longer, and who has been honorably discharged therefrom, or for a term of less than six months, 80 acres of land, either for himself or his widow, if unmarried, or minor heirs.

H. R. 1319, Hovey. Granting 160 acres of land to each of the surviving commissioned and n.-c. officers, musicians, and privates, whether of regulars, volunteers, rangers, or militia, who were regularly mustered into the service of the United States, and also to Army wagon masters and teamsters, and to every officer, commissioned and n.-c. seamen, flotilla man, marine clerk, and landsman of the Navy in the wars in which the U. S. has been engaged since March 4, 1861, provided they did not desert nor were dishonorably discharged.

H. R. 1326, Bynum. Giving to honorably discharged soldiers, sailors, and marines of the rebellion increased pensions for loss of hearing.

H. R. 1347, Steele. To increase the efficiency of the line of the Army, and for other purposes. [The text of this bill will be found on Page 487.]

H. R. 1348, Steele. To equalize the bounties of soldiers, sailors, and marines by allowing \$394 for each month of actual service between April 12, 1861, and May 9, 1865, to them, their widows or children. Bounties already paid to be deducted. No bounty to be paid to or on account of anyone who served as a substitute in the Army, was a captured prisoner of war at the time of his enlistment, or was discharged, on his own application or request, for other cause than serious disability, unless such discharge was obtained with a view to re-enlistment or to accept promotion in the military or naval service of the United States, or to be transferred from one branch of the military service to another.

H. R. 1356, Weaver. For the relief of the soldiers and sailors who served in the Army and Navy of the United States in the late war for the suppression of the rebellion, and to restore to them equal rights with the holders of Government bonds, by allowing the difference in value between the currency received and gold coin. Officers are not included.

H. R. 1370, Holmes. For pensioning prisoners of war who were confined in Confederate military prisons during the late war.

H. R. 1391, Lyman. To pension all honorably discharged soldiers, sailors and marines of the late civil war, the new pension to be in addition to any now received.

H. R. 1398, Perkins. That all officers of the volunteer army in the War of the Rebellion who served the Government of the United States as officers or privates shall be entitled to receive extra pay as follows, namely: Where the enlistment was for the term of one year, one month's pay; where the enlistment was for the term of two years, two months' pay; where the enlistment was for the term of three years, three months' pay: *Provided*, That the benefits of this act shall not apply to such officers as received extra pay under the provisions of the act approved March 3, 1868, and the act amendatory thereto, approved July 13, 1868.

H. R. 1400, Perkins. That all soldiers of the late war who enlisted after April 19, 1861, for a period of not less than three years, and who afterwards were discharged to receive promotion and receive commissions as officers in the Army, or who were discharged to receive promotion prior to their re-enlistment as veterans, shall be paid all installments of bounty which were withheld from them on account of then being so commissioned: *And provided*, That all volunteer soldiers or sailors of the late war who were honorably discharged on account of diseases contracted in the line of duty to receive the same bounty that they would have been entitled to had they been discharged on account of wounds. Widows and orphans of deceased soldiers to be included in the benefits of this act.

H. R. 1414, Ryan. To extend for two years the time for filing claims for horses and equipments lost.

H. R. 1424, Morrill. For the sale of certain portions of the Fort Leavenworth Military Reservation.

H. R. 1463, Wm. C. P. Breckinridge. To detail officers of the Army, not over 45 years of age, not more than two of whom at any one time shall belong to any one arm of the Service, the following legations: Each at London, Berlin, Paris, Madrid, Rome, St. Petersburg, Vienna and Constantinople. Sec. 2. That in addition to the pay and emoluments which by law such officers so detailed would be authorized to receive if on duty in the United States, they shall receive — dollars per month, and their actual traveling expenses going to and returning from their respective posts of assignment, and while engaged in actual travel in the performance of the proper duties of the assignment. Sec. 3. That the Secretary of War, subject to the approval of the President, shall issue such instructions and require of them such duties as he may see fit to accomplish the object of such detail, which is to secure the most accurate and recent information as to the condition of foreign armies, and the improvements and alterations in the art of war, the character of the weapons and munitions of war, and in the drill, discipline and government of such armies. Sec. 4. That the President shall have power to order any of such officers so detailed to any other country in Europe or Asia, or to any seat of war or place of hostilities.

H. R. 1469, Caruth. For the purchase of the portrait of Gen. Geo. H. Thomas, painted by Gen. S. W. Price.

H. R. 1508, Boutelle. To relieve from the charge of desertion any appointed or enlisted man of the Navy or Marine Corps who served in the late war more than six months, where it shall be made to appear, to the satisfaction of the Secretary of the Navy, he served faithfully until the expiration of his term of enlistment, May 1, 1865, or was prevented from completing his term of service by reason of wounds received or disease contracted in the line of duty, or voluntarily returned to serve until he was mustered out, unless, not being sick or wounded, he left his command, without proper authority, while the same was in presence of the enemy.

H. R. 1512, Gibson. Gives disbursing officers of the Navy, in charge of the accounts of the vessels of the Coast Survey, sea pay while on such duty, and clerks to paymasters of the Coast Survey vessels \$1,300 a year.

H. R. 1555, Cuthbertson. Appropriates \$750,000 for a gun factory for finishing and assembling of heavy ordnance, to be erected at a United States arsenal, to be selected by a board, to be known as the Ordnance Construction Board, to consist of three officers of the Army and one of the Navy, experts in ordnance; also two civilian experts, in the qualities and manufacture of iron and steel, who shall receive \$10 a day each.

Sec. 2. For the purchase of rough finished, oil tempered,



and annealed steel forgings for high power coast defence guns of eight, ten, and twelve inch calibre, \$7,500,000. *Provided*, That none of the money hereby appropriated shall be expended except for steel, accepted and delivered after due inspection, under the direction of the Secretary of War.

Sec. 3. That the Secretary of War be, and hereby is, authorized to make contracts with responsible steel manufacturers for the supply of rough bored, rough turned, and tempered steel, in forms suitable for heavy ordnance adapted to modern warfare, and steel, finished, for armor and other fortification and Army purposes, in quantity not to exceed ten thousand gross tons, in quality and dimensions conforming to specifications, subject to inspection and tests at each stage of manufacture, and including all the parts of each calibre specified: *Provided*, That each bidder shall contract to erect in the United States a suitable plant, including the best modern appliances, capable of making all the steel required by the proposed contract, and of finishing it, in accordance with the contract, and agree in the case of the award of a contract to deliver yearly a specified quantity of each calibre, the time of delivery of the smaller calibres to commence at the expiration of not more than eighteen months and that of the largest calibres at the expiration of not more than three years from the date of the acceptance of the contract; and that all the forgings shall be manufactured in the United States.

Sec. 4. The Secretary of War is hereby authorized, if said board shall so advise, to contract for the manufacture of a limited number, not exceeding twelve, specimen guns of cast steel, of standard sizes and calibres, and to cause the Ordnance Construction Board to test such guns thoroughly by all such tests as such guns would be subjected to in actual service, and if such tests should prove satisfactory, the said Secretary of War is authorized to contract for the manufacture of such number of such cast steel guns as the Ordnance Construction Board may advise, but not to exceed one hundred guns, and for the purposes of this section there is hereby appropriated the sum of \$250,000.

Sec. 5. For the construction of 12-inch rifled mortars, either of steel or of cast-iron, steel-hooped, and either muzzle-loading or breech-loading, as the board hereinafter provided for shall determine, to fire a projectile not less than 615 lbs. weight, to have a maximum range and an accuracy of fire at least equal to the best existing similar pieces, \$500,000.

Sec. 6. For service and experimental sea-coast gun-carriages and testing the same, and for alterations of existing sea-coast gun-carriages to adapt them for service with guns on hand or such as may be hereafter manufactured, \$250,000.

Sec. 7. For the purchase or construction of torpedo-boats, torpedoes, and submarine mines suitable for coast defence, subject to specifications approved by the board hereinafter provided for, \$500,000.

Sec. 8. The contracts for all material under this act, except such as may be furnished from Government workshops, shall be awarded to the lowest bidder, after proper advertisement, and under such conditions, specifications, details and terms, as the aforesaid board may determine; and the board shall certify that the prices under which contracts are awarded are reasonable and just: *Provided*, however, That all material entering into the construction of the defences herein provided for shall be of American material and manufacture.

Sec. 9. To enable the board hereinafter provided for to make such proofs and tests of guns, mortars, torpedoes, torpedo-boats, and other appliances provided for in this act, as in its judgment may be necessary, and for the necessary expenses of said board, including clerical assistance, draughtsmen, and so forth, the sum of \$250,000 is hereby appropriated.

Sec. 10. The said Ordnance Construction Board shall annually report its operations to the Secretary of War, for the submission to Congress at the beginning of each session. And the appropriations herein provided for shall be available for five years.

H. R. 1560, Cutcherson. That the provisions of "An act to provide for the muster and pay of certain officers and enlisted men of the volunteer forces," approved June 4, 1864, as amended by the act approved Feb. 3, 1867, be extended for a period of three years from June 3, 1867.

H. R. 1576, Brewer. Granting a pension to telegraphic operators during the war for the preservation of the Union.

H. R. 1621, McKinney. That hereafter the selection of naval cadets to be retained in the Navy, as now provided by law, shall be made from the class of naval cadets that have completed the fourth academic year at the Naval Academy, and those selected to be retained in the Navy shall be specially educated for two years in seamanship, naval ordnance, gunnery, navigation, surveying and naval tactics; and on the completion of the academic course of six years, and on the recommendation of the academic board, shall be graduated and appointed officers in the lowest grades in the line of the Navy and in the Marine Corps. Those naval cadets who are not selected at the end of the fourth academic year to be retained in the Navy shall be given an honorable discharge and six months' pay: *Provided*, That from the two classes of naval cadets who have completed the fourth academic year there shall be selected to be retained in the Navy a number equal to the number of vacancies which occurred during their fourth academic year in the line of the Navy and Marine Corps; those who are not retained in the Navy from the first class shall be given an honorable discharge; and one year's sea pay: *Provided further*, That the Secretary of the Navy shall permit annually, not more than ten naval apprentices, from those who are best qualified and have served not less than one year as such, to appear before the academic board for examination. Those found qualified shall be admitted to the Naval Academy subject to all laws, regulations, and benefits governing the appointment of naval cadets.

Sec. 2. Candidates to fill vacancies in the lower grades of the staff corps of the Navy shall be examined by boards composed of officers, not below the relative rank of commander, of the corps to which appointments and promotions are to be made. To fill vacancies in the various grades having the relative rank of lieutenant commander, 150 lieutenants, 100 ensigns, 100 petty vacancy two officers, heading the list of those eligible in the next lower grade, and not more than two civilians, not less than 25 and more than 35 years of age, shall be permitted to appear; the candidates passing the best examination to be appointed. In the lowest grades these examinations shall be open to all, between 24 and 40 years of age, who apply. Promotions above the grade having the relative rank of lieutenant commander shall be made as heretofore. Candidates for appointment or promotion who receive 85 per cent. on their examination shall be appointed as vacancies occur; those receiving less than 65 per cent. shall not be eligible for one year for another examination. Officers who twice fail shall retain their number on the register but shall not be eligible for promotion thereafter; all officers to take rank according to the appointment of commission.

Sec. 3. That as vacancies occur in the various grades of the Navy, only one-half of the promotions shall be made to fill the same until the number in said grade shall be reduced below the number fixed by the provisions of this act for said grade, as follows:

Active list of line officers: 5 rear admirals, 10 commodores, 40 captains, 80 commanders, 75 lieutenant commanders, 250 lieutenants, 125 junior lieutenants, and 100 ensigns: *Provided*, That a commodore in charge of a squadron shall have the relative rank and pay of a rear admiral.

Active list of staff officers, with relative rank, as follows: Medical directors, 10 captains; medical inspectors, 15 commanders; surgeons, 50 lieutenant commanders; passed assistant surgeons, 60 lieutenants; assistant surgeons, 50 junior lieutenants; pay directors, 10 captains; pay inspectors, 15 commanders; paymasters, 40 lieutenant-commanders; passed assistant paymasters, 20 lieutenants; assistant paymasters, 10 junior lieutenants; chief engineers, 10 captains, 15 commanders, 50 lieutenant commanders; passed assistant engineers, 60 lieutenants; assistant engineers, 50 junior lieutenants: *Provided*, That the cadet engineers now in the service shall be appointed assistant engineers from the time of their graduation, and that the grade of cadet engine

is hereby abolished: naval constructors, 5 as captains, 4 as commanders, 5 as lieutenant-commanders; assistant naval constructors, 12 as lieutenants, 12 as junior lieutenants; civil engineers, 2 as captains, 2 as commanders, 3 as lieutenant-commanders, 3 as lieutenants: *Provided*, That a civil engineer not below the relative rank of commander shall be appointed Chief of Bureau of Yards and Docks; chaplains, 2 as captains, 5 as commanders, 6 as lieutenant-commanders, 6 as lieutenants; professors of mathematics, 3 as captains, 4 as commanders, 5 as lieutenant-commanders; assistant professors, with the same pay as assistant naval constructors; 2 as lieutenants, 2 as junior lieutenants: *Provided*, That a professor of mathematics now below the relative rank of commander shall be appointed superintendent of the Naval Observatory, and that the assistant astronomers at the Naval Observatory shall be appointed assistant professors of mathematics.

Sec. 4. That there shall be no more appointments of mates in the Navy: the law relating to the retirement of warrant officers shall apply to the mates now in the Naval Service: *Provided further*, That the 10 senior, of each grade of, warrant officers shall have the relative rank of junior lieutenant, and that the remaining warrant officers shall have the relative rank of ensign.

Sec. 5. That the commandant of the Marine Corps shall have the rank and pay of a brigadier general of the Army.

Sec. 6. That on the passage of this act the Secretary of the Navy shall order all officers on the active list of the Navy, who have not passed a medical examination within two years, to appear before a board of medical officers for said examination. Officers who fail to pass said medical examination shall be immediately placed on the retired list of the Navy.

Sec. 7. That there shall be appointed from civil life, by the President, with and by the advice and consent of the Senate, an Assistant Secretary of the Navy, at a salary of \$5,000 per year, who shall act as Secretary of the Navy in the absence of that officer: *Provided further*, That the Assistant Secretary of the Navy shall, under the direction of the Secretary, direct the movements and employment of officers and keep their records of service, and shall have charge of the office of naval intelligence.

Sec. 8. That no officer now in the Naval Service shall be deprived of his commission by reason of any provision of this act changing the rating or reducing the number of officers.

H. R. 1646, McAdoo. That the law regulating the pay and retirement of warrant officers in the Navy shall be continued to apply to the 24 officers serving as mates.

R. R. 1674, Merriman. Sec. 1 and 3. Allows any person, firm or corporation owning a steam vessel in the United States to enroll the same as an auxiliary naval vessel, subject to immediate conversion to the public use whenever so commanded by the President.

Sec. 2. The Secretary of the Navy, assisted by a board to be selected by him and to consist of one naval officer of command rank, one naval constructor, one chief engineer of the Navy, and one actual shipbuilder, and one actual shipowner in the United States, shall prescribe the requirements in hull, machinery and fittings.

Sec. 4. Vessels capable of steaming 18 knots per hour for four consecutive hours under the conditions prescribed by the Secretary of the Navy for the trial of naval vessels built by contract, shall receive \$15 per annum for each ton of actual displacement at such rate: 17 knots, \$12; 16 knots, \$10; 15 knots, \$7.50. Vessels capable of steaming less than 15 knots per hour, but which may be adapted to immediate conversion to the public use as transports, or for purposes of warfare other than those of active cruising vessels, to be compensated at a rate to be fixed by contract, not to exceed \$5 per annum for each ton of actual displacement at the end of the trial of such vessel. But whenever, in the discretion of the President, a sufficient number of vessels of the last of the above descriptions to meet the public needs shall have been enrolled the further enrollment of such vessels may be suspended.

Sec. 5. Such vessels shall be subject to inspection at least once every year by the Naval Board of Inspectors as to their conformity with the requirements of the Navy, their compensation to be paid on a favorable report.

Sec. 7. Whenever any auxiliary naval vessel of the United States shall be ordered by the President to be converted to the public use, the said vessel shall be surveyed and condemned to the public use, and the compensation due to her owners for such conversion and use shall be determined by a board to be appointed by the President, of which board the Secretary of the Navy shall be the presiding officer, and of which at least one civilian shipbuilder and at least one civilian shipowner, not interested in such vessel, shall be members. And upon the report of such board, compensation shall be paid to the owners of such vessel in the manner now provided by law for the charter of private vessels for the public use.

H. R. 1657, Bliss. That the adjutant and inspector, the paymaster, and the quartermaster of the Marine Corps, after 30 years' service, shall have the rank of lieutenant-colonel, and after 40 years' service, when retired, the rank and pay of colonel retired; and the A. Q. M. after 25 years' service, 10 of which shall have been in the Q. M. Dept. of said corps, shall have the rank of major. Sec. 2. That appointments to fill vacancies in the offices of adjutant and inspector, of paymaster, and quartermaster of the Marine Corps, shall be made by selections from the line officers on the active list who have served 20 years and upwards. A vacancy occurring in the office of Q. M. of the Marine Corps shall hereafter be filled by promotions from the A. Q. M. on the active list according to seniority; and appointments to fill vacancies in the office of A. Q. M. shall be made by selection from the line officers on the active list who have served 15 years and upwards in said corps; but nothing in this act shall entitle any of the above officers to back pay or allowances.

H. R. 1729, Grosvenor. That section 1235 be amended so as to read as follows:

"Sec. 1235. The President may, upon the application of any established college or university within the United States, or upon the application of the board of trustees, approved by the superintendent of any soldiers' and sailors' orphan's home established pursuant to the statutes of any of the States of the Union, which said college or university or home shall have the capacity to educate at the same time not less than 150 male students, detail an officer of the Army to act as president, superintendent, or professor thereof; but the number of officers so detailed shall not exceed thirty-five at any time; and they shall be apportioned throughout the United States, as nearly as may be practicable, according to population; but such apportionment shall not deprive any established soldiers' and sailors' orphan's home in each State from having one such officer. Officers so detailed shall be governed by general rules prescribed from time to time by the President. The Secretary of War is authorized to issue, at his discretion, and under proper regulations to be prescribed by him, out of any small arms or pieces of field artillery belonging to the Government, and which can be spared for that purpose, such number of the same as may be prescribed for military instruction and practice by the students of any college, or university, or soldiers' and sailors' orphan's home, under the provisions of this section; and the Secretary shall require a bond in each case, in double the value of the property, for the care and safe-keeping thereof and for the return of the same when required.

H. R. 1738, Romeis. To provide for the survey of certain historic grounds, locations, and military works in Ohio.

H. R. 3366, Jones, Ala. Gives fleet paymasters, and engineers, and chief engineers and paymasters who did the duty of fleet officers, the same share of prize money as fleet captains; and applies to them the act authorizing corrections to be made in errors of prize list, approved June 8, 1874.

H. R. 4076.—Harmer.—For relief of sufferers by wreck of U. S. S. Ashuelot.

H. R. 4367, Nutting. Provides that the number

of warrant officers in the U. S. Navy be fixed by law at 80 in each grade, and the vacancies in these grades shall be filled by men who have served an apprenticeship in the Navy, and who have re-enlisted for three or more years and have undergone such a course of instruction as the Honorable Secretary of the Navy may designate. That the number of ensigns in the Navy be increased by four each year, to be appointed from those warrant officers who have served an apprenticeship in the Navy, and who are between the ages of 24 to 30 years. Those to be selected shall be those who after competitive examination shall have the highest average, and who may have applied for such examination. That those so selected shall be sent to the Naval Academy for 1 year for such further instructions as the Examining Board may recommend; but no examination during or at the end of such course shall jeopardize their positions in the Navy, but upon passing to the next higher grade they will be governed by all laws now or which may be in force at that time. That they shall be given their commission as ensigns in the U. S. Navy as soon as practicable after the competitive examination. That the pay of ensigns in the U. S. Navy shall be the same as the highest graduated pay of warrant officers.

H. R. 4366, Whitthorne. Any officer of the Navy, line or staff, who has been promoted for eminent and conspicuous conduct in battle, or extraordinary heroism, under the provisions of the act approved Jan. 24, 1865 (U. S. 1506), may hereafter be placed on the retired list of the Navy, with the rank and sea pay of his rate; but no officer shall be retired under this act except upon his own application.

H. R. 4396, Goff. That from and after the passage of this act no officer of the Navy below the grade of commodore in the line, medical director in the Medical Corps, pay director in the Pay Corps, or chief engineer of the relative rank of captain in the Engineer Corps shall be promoted to a higher grade until he has had at least two years' sea service on board a naval vessel in commission, in the grade at that time held by him. Sec. 2. That in case the service of an officer in any grade shall be less than four years, he shall not be promoted unless he has had a sea service of at least one-half his whole service in the grade at that time held by him.

H. R. 4583, Campbell, N. Y. To appoint as Assistant Engineers in the Navy, the cadet engineers of the classes of 1881 and 1882, now in the Navy: *Provided*, That the commissions of the class of 1881 be dated from July 1, 1883, and their names be placed on the Navy Register immediately after the name of Wm. D. Weaver, and they will take precedence in their grade and corps according to their proficiency as shown by their order of merit at the date of graduation, and that the commissions of the class of 1882, to be dated from July 1, 1884, and their names be placed on the Navy Register immediately after the name of Chas. E. Rommel, and they take precedence in their grade and corps according to their proficiency as shown by their order of merit at the date of graduation.

H. R. 60.—Stalenecker.—To compile and print a register of naval volunteers.

H. R. 3435.—Forney.—To reappoint and retire Alfred Hedberg, late U. S. Army.

H. R. 7321.—Wilkinson.—To reappoint Wm. English a lieutenant in the Army.

H. R. 3890.—Bacon.—To appoint Sergt. John Rigney, U. S. A., a second lieutenant.

H. R. 4026.—Bingham.—To promote Commodore Louis C. Barton, U. S. N., retired, to Rear Admiral.

H. R. 4027.—Bingham.—To appoint and retire Wm. F. Pratt, late 2d Asst. Engineer, U. S. N.

H. R. 4028.—Bingham.—To muster Edward G. Pendleton as Captain of Infantry, U. S. A., from Aug. 31, 1861, to July 10, 1864.

H. R. 4057.—Bingham.—To restore Wentz C. Miller to the rank of 1st Lieut., 4th U. S. Cav., and retire him.

#### MR. CHARLES KNAP.

MANY officers of the Army and Navy will learn with sincere regret of the death of Mr. Chas. Knap, which occurred at Washington on Jan. 7. Mr. Knap was born at New Berlin, Chemung County, N. Y., on May 1, 1816. His youth was spent in the interior of New York, but he was the owner and manager of the Fort Pitt Cannon Foundry at Pittsburgh at the commencement of our Civil War. The big guns turned out at that foundry made Mr. Knap famous and gave him a fortune, which he dispensed with a princely hospitality. His residence at the corner of 1 and 17th streets, Washington, was celebrated for its splendid entertainments, one of which the floral decorations alone cost upwards of \$5,000.

But in an evil hour Mr. Knap left his interests at the Fort Pitt Foundry to some relatives, and went to Europe with an invalid wife. He returned only to find himself utterly ruined in fortune by the bad management of his business here. His estimable wife succumbed to disease, and, after giving up the last vestige of his property, he took a modest apartment at Washington, where he daily enjoyed the society of some of his old friends, who never once heard a murmur of reproach to the authors of his misfortunes, or of repining for his ancient prosperity.

Two or three years since he became nearly blind from cataract of the eyes, from which an operation gave him partial relief. Bright's disease, with the usual concomitants, set in not long after, and while maintaining his cheerfulness and his full mental powers to the last, he quietly passed away at his rooms near the Metropolitan Club.

"So passed the strong, heroic soul away."

THE Pittsburg Steel Company have met with complete success in casting the 6-inch steel gun for which they contracted. The casting was made on Wednesday. It will take some days for the casting to cool before it can be taken from the mould. A special lathe is being made to bore the gun. The credit for this successful work is due to Mr. Wm. Hainsworth, and we are glad to learn that he is entirely confident of the result of this experiment which has followed the persistent demand for it in the ARMY AND NAVY JOURNAL. The establishment of this new method of manufacturing heavy guns will not only decrease their cost but will greatly simplify and expedite the process of manufacture, as can be readily seen.

The President has approved the sentence of dismissal in the case of 1st Lieut. Chas. R. Ward, 10th Cav., tried at Fort Lowell, A. T., in October last on charges of drunkenness on duty.

Leave granted 2d Lieut. Henry McCain, 3d Inf., for one month.



## THE ARMY.

G. O. 2, H. Q. A., Jan. 9, 1888.

By direction of the Secretary of War, the annexed form (omitted) No. 55, Medical Department, is substituted for that published in G. O. 36, of 1881, from this office. (Pages 1129 and 1130, Army Regulations.)

By command of Lieutenant General Sheridan:  
R. C. DRUM, Adjt.-Gen.

G. O. 3, H. Q. A., Jan. 12, 1888.

By direction of the Secretary of War the fourth class of paragraph 2456 of the Regulations, as amended by G. O. 11, of 1884, from this office, is further amended to read as follows:

The company commander shall keep in the company record book an account of every deposit made by the soldier; and after each regular payment he and all officers having charge of distinct detachments of enlisted men at date of deposit shall transmit direct to the Paymaster General a list of names of depositors, showing in each case the date, place, and amount of deposit, and name of paymaster receiving the same. These lists will be carefully examined and compared with the record of deposits on the company or detachment book and the deposit book of the soldier before transmittal.

By command of Lieutenant General Sheridan:  
R. C. DRUM, Adjt.-Gen.

CIR. 12, H. Q. A., A. G. O., Dec. 31, 1887.

The following decisions, rulings, etc., have been made during the month of December, 1887, and are published to the Army for the information of all concerned:

## SALE AND TRANSPORTATION OF FORAGE BY QUARTERMASTER'S DEPARTMENT FOR HOSPITAL COWS.

The Quartermaster's Department is authorized to sell at cost price from stock on hand, or to be delivered under contract, such forage as may be necessary for the hospital cows, whenever it can be spared.

When forage cannot be obtained from the Quartermaster's Department, transportation will be furnished by that department for such as may be purchased by the post surgeon at the nearest initial point. Food for hospital cows of a kind not issued by the Quartermaster's Department may, under the provisions and restrictions of paragraph 1904 of the Regulations (as amended by G. O. 53 of 1885, from this office), be transported by the Quartermaster's Department, if purchased from hospital funds.—(Decision Sec. War, letter Dec. 10, 1887.)

R. C. DRUM, Adjt.-Gen.

G. O. 1, DEPT. OF TEXAS, Jan. 6, 1888.

Announces target practice season at posts within the Dept. of Texas for 1888.

Each post commander will see that the range at his post is in proper condition, and that the necessary target material is on hand, so that practice may commence at the appointed time. Every troop and company must be thoroughly exercised in skirmish firing, as laid down in the book of instructions, it being the most important aid in teaching the soldier to become a practicable marksman.

## STAFF CORPS AND DEPARTMENTS.

## Judge Advocate General's Department.

Leave for seven days is granted Capt. Stephen W. Grosbeck, A. J. A. (S. O. 133, Dec. 31, D. Dak.)

## Pay Department.

Major Wm. Smith, Paymr., will proceed to Rock Island Arsenal, Ill., and pay the troops (S. O. 4, Jan. 9, Div. Mo.)

Major Frank M. Cox, Paymr., will be relieved from duty in the Dept. of Arizona, and will report to the Comdg. Gen., Dept. of Cal., for duty at San Francisco. Major Daniel R. Larned, Paymr., will be relieved from duty in the Dept. of Cal., and will report to Washington and report to the Paymaster General for duty (S. O. Jan. 7, H. Q. A.)

Major John C. Muhlenberg, Paymr., will proceed on public business to Portland, Ore., for the public service (S. O. 133, Dec. 28, D. Columbia.)

The following payments of troops on muster rolls of Dec. 31, are ordered: Major James P. Canby, Paymr., Fort Townsend and Boise Barracks. Maj. John B. Keefe, Paymr., Forts Walla Walla, Sherman and Spokane. Major John C. Muhlenberg, Paymr., Vancouver Barracks and Fort Klamath (S. O. 191, Dec. 26, D. Columbia.)

## Medical Department.

Leave for twenty days is granted Capt. A. H. Appel, asst. surg. (S. O. 1, Jan. 3, Dept. Mo.)

The contract of A. A. Surg. C. K. Merriam is annulled, to take effect Dec. 31 (S. O. 191, Dec. 30, D. Columbia.)

Capt. Louis S. Tesson, asst. surg., is relieved from duty at Chicago, and will report to the C. O., Watervliet Arsenal, N. Y., for duty as post surgeon, relieving Capt. Henry G. Burton, asst. surg. (S. O. Jan. 7, H. Q. A.)

(Capt. Richards Barnett, asst. surg., is relieved from duty in the Div. of the Atlantic, to take effect at the expiration of his present sick leave, and will report to the C. O., Fort Riley, for duty (S. O. Jan. 7, H. Q. A.)

Private Henry V. Murphy, Hspl. Corps, Fort Douglas, is transferred to camp at Highwood, Lake County, Ill. (S. O. Jan. 7, H. Q. A.)

## Engineers and Ordnance Departments.

Leave for one month, with permission to apply for an extension of one month, is granted 1st Lieut. Cassius E. Gillette (S. O. Jan. 11, H. Q. A.)

1st Lieut. Henry E. Waterman, C. E., will be relieved from his present duties, and report to the Supt. U. S. M. A., West Point, N. Y., for duty at the academy (S. O. Jan. 11, H. Q. A.)

Capt. Frank Baker, Ord. Dept., will proceed from Frankford Arsenal to the powder mills of E. I. Du Pont and Co., near Wilmington, Del., on public business (S. O. Jan. 7, H. Q. A.)

## Chaplains.

Post Chaplain Brant C. Hammond is relieved from duty in the Dept. of Texas (S. O. 1, Jan. 4, D. Tex.)

## Signal Corps.

2d Lieut. Julius H. Weber, Sig. Corps, will proceed from San Antonio, Tex., to certain points in Texas, and make a thorough inspection of the signal service stations located thereat (S. O. Jan. 5, H. Q. A.)

3d Lieut. Benjamin M. Pursell, Signal Corps, will proceed from Titusville to Jupiter Light House, Fla., and carry out special instructions (S. O. Jan. 7, H. Q. A.)

3d Lieut. John C. Walsh, Sig. Corps, will proceed

to certain points, and make a thorough inspection of the signal service stations located thereat (S. O. Jan. 7, H. Q. A.)

## THE LINE.

The Stations of Companies not mentioned here will be found by reference to last number of the JOURNAL.

## 1st Cavalry, Colonel N. A. M. Dudley.

Hdqrs., B. D. E. G., and K. Ft. Custer, Mont.; A. Ft. Maginnis, Mont.; J. Ft. Leavenworth, Kas.; F and H, Ft. Assiniboine, Mont.; M. Camp Sheridan, Wyo.; C and L, Ft. Buford, D. T.

2d Lieut. Peter E. Traub is detailed on recruiting service at Fort Maginnis, M. T. (S. O. 133, Dec. 31, D. Dak.)

Pvt. J. H. Parrott, Troop B, is transferred to the Hospital Corps as private (S. O. Jan. 9, H. Q. A.)

## 2nd Cavalry, Colonel Nelson B. Sweetzer.

Hdqrs., B. E. F. G., and I, Ft. Walla Walla, Wash. T.; A and K, Presidio of San Francisco, Cal.; C and M, Ft. Bidwell, Cal.; D, Boise Bks., Idaho; H, Ft. Spokane, Wash. T.; L, Ft. Sherman, Idaho.

1st Lieut. Frederick W. Kingsbury, R. Q. M., will report in person to the Chief Q. M. at Vancouver Barracks on official business, and then return to Fort Walla Walla (S. O. 191, Dec. 26, D. Columbia.)

## 3rd Cavalry, Colonel Albert G. Brackett.

Hdqrs., A, C, E, F, and G, Ft. Clark, Tex.; B, G, and I, San Antonio, Tex.; D and L, Ft. Ringgold, Tex.; H, Ft. McIntosh, Tex.; J and K, Ft. Brown, Tex.

A furlough for four months, with permission to go beyond sea, is granted Saddler Sergt. Anton Appel (S. O. 4, Jan. 9, Div. M.)

## 4th Cavalry, Colonel Chas. E. Compton.

Hdqrs., D, F, H, I, and K, Ft. Huachuca, Ariz.; A, E, and L, Ft. Lowell, Ariz.; C and G, Ft. Bowie, Ariz.; M, Ft. McDowell, Ariz.; B, Ft. Myer, Va.

The resignation of 1st Lieut. David N. McDonald has been accepted by the President, to take effect March 4, 1888 (S. O. Jan. 7, H. Q. A.)

## 5th Cavalry, Colonel James P. Wade.

Hdqrs., B, C, G, and K, Ft. Reno, Ind. T.; E and H, Ft. Elliott, Tex.; D and L, Ft. 801, Ind. T.; A, F, and I, Ft. Supply, Ind. T.; M, Ft. Leavenworth, Kas.

The leave for seven days granted Major J. J. Upham is extended fifteen days (S. O. 1, Jan. 3, Dept. M.)

The leave granted 2d Lieut. Lester W. Cornish is extended one month (S. O. Jan. 6, H. Q. A.)

The leave for one month granted 1st Lieut. Edwin P. Andrus is extended fifteen days (S. O. 4, Jan. 9, Div. M.)

## 6th Cavalry, Colonel Eugene A. Carr.

Hdqrs., A, C, and H, Ft. Bayard, N. M.; I and K, Ft. Wingate, N. M.; E and F, Ft. Lewis, Colo.; D and L, Ft. Stanton, N. M.; M, Ft. Leavenworth, Kas.; B, Ft. Myer, Va.; G, Ft. Union, N. M.

Two months of the ordinary leave of absence granted 1st Lieut. (then 2d Lieut.) George H. Sands, in S. O. 133, June 10, 1887, H. Q. A., is changed to leave of absence on account of sickness, to date from Nov. 17, 1887 (S. O. Jan. 11, H. Q. A.)

## 8th Cavalry, Colonel Elmer Otis.

Hdqrs., A, C, D, F, and H, Ft. Davis, Tex.; K, Camp Del Rio, Tex.; G, Camp Pecos, Colorado, Tex.; L, Ft. Hancock, Tex.; I, B, and M, Ft. Concho, Tex.; E, Camp at Eagle Pass, Tex.

The leave for seven days granted 1st Lieut. J. B. Hickey, Fort Concho, is extended eight days (S. O. 150, Dec. 30, D. Tex.)

Leave for one month is granted Capt. A. B. Kauffman, Camp at Eagle Pass, Tex. (S. O. 1, Jan. 4, D. Tex.)

The extension of leave granted 1st Lieut. J. B. Hickey is further extended three days (S. O. 1, Jan. 4, D. Tex.)

A furlough for four months, with permission to go beyond sea, is granted Sergt. William Hammond, Troop A (S. O. 4, Jan. 9, Div. M.)

Sergt. A. W. James, Troop B, 8th Cav., leads the sharpshooters in Texas for 1887—score, 559.

## 9th Cavalry, Colonel Edward Hatch.

Hdqrs., C, F, J, and K, Ft. Robinson, Neb.; A and G, Ft. Niobrara, Neb.; D and H, Ft. McKinney, Wyo.; M, Ft. Washakie, Wyo.; B and E, Ft. Du Chene, Utah (Post-office address via Ouray, Utah); L, Ft. Leavenworth, Kas.

The leave for one month granted 1st Lieut. Robert T. Emmet is extended one month (S. O. 2, Jan. 5, Div. M.)

The leave granted 2d Lieut. James W. Benton is extended one month (S. O. Jan. 10, H. Q. A.)

In the JOURNAL of Dec. 31 we referred to the shooting of 1st Sergt. William Stance, Troop F, 9th Cav., near Fort Robinson, Neb. A correspondent at that post writes: "He was a Congressional medal man and left it and a manuscript of his life, with drawings, which should go to the Army Museum. Great effort has been made to discover the perpetrators of this villainous murder by members of this garrison. Stance was very strict. But his troop needed a strong hand, and it took a pretty nifty man to be 1st sergeant."

## 2nd Artillery, Colonel Romeyn B. Ayres.

Hdqrs., G, and L, St. Francis Bks., Fla.; A\* and E, Little Rock Bks., Ark.; B and H, Ft. Barrancas, Fla.; C and D, Mount Vernon Bks., Ala.; F\*, Ft. Leavenworth, Kas.; I, Ft. Monroe, Va.; K and M, Jackson Bks., La.

## 5th Artillery, Colonel Alex. Piper.

Hdqrs., E, F\*, I, and H, Ft. Hamilton, N. Y.; A, C, and L, Ft. Columbus, N. Y.; G, Ft. Monroe, Va.; B, Ft. Wadsworth, N. Y.; D\*, Ft. Douglas, Utah; K and M, Ft. Schuyler, N. Y.

The U. S. Grand Jury has indicted Francis H. King for the murder of Ryan H. Willis, at Fort Hamilton recently.

## 1st Infantry, Colonel William R. Shafter.

Hdqrs., A, D, I, and K, Angel Island, Cal.; F and G, Benicia Bks., Cal.; C and E, Presidio of San Francisco, Cal.; B, Ft. Gaston, Cal.; H, Ft. McDowell, Cal.

Corpl. Ernest A. Stamm, Co. B, heads the list of sharpshooters in the Dept. of California for 1887, with a total score of 555.

## 2nd Infantry, Colonel Frank Wheaton.

Hdqrs., A, B, C, D, E, F, G, H, I, and K, Ft. Omaha, Neb.

## 3rd Infantry, Colonel John R. Brooke.

Hdqrs., A, G, H, and K, Ft. Shaw, M. T.; B, D, F, and I, Ft. Missoula, M. T.; C and E, Ft. Custer, M. T.

Leave for one month is granted Capt. William C. Bartlett, Fort Missoula, M. T. (S. O. 1, Jan. 3, D. Dak.)

Privates James McAllen, Co. C, and Patrick Lee

and Andrew Culp, Co. E, Fort Custer, are transferred to the Hospital Corps as privates (S. O. Jan. 9, H. Q. A.)

## 4th Infantry, Colonel William P. Carlin.

Hdqrs., C, D, E, and H, Ft. Sherman, Idaho; A, B, F, I, and K, Ft. Spokane, Wash. T.; G, Boise Barracks, Idaho.

## 6th Infantry, Colonel Alex. McD. McCook.

Hdqrs., H, and I, Ft. Leavenworth, Kas.; A, B, C, D, E, and G, Ft. Douglas, Utah; F and K, Highwood, Lake County, Ill.

The leave granted 1st Lieut. George B. Walker is extended two months (S. O. Jan. 6, H. Q. A.)

2d Lieuts. Reuben B. Turner and Elmore F. Taggart, Fort Douglas, U. T., will proceed to Camp at Highwood, Lake County, Ill., and report for duty (S. O. 4, Jan. 9, Div. M.)

## 10th Infantry, Colonel Henry Douglass.

Hdqrs., B, C, F, and I, Ft. Union, N. M.; A and E, Ft. Lyon, Colo.; G and K, Ft. Crawford, Colo.; D, Ft. Selden, N. M.; H, San Carlos A. T.

## 12th Infantry, Colonel Edwin F. Townsend.

Hdqrs., E, G, H, and I, Ft. Yates, D. T.; A, B, C, and D, Ft. Sully, D. T.; K, Ft. Bennett, D. T.; F, Ft. Lincoln, D. T.

## 13th Infantry, Colonel Robert S. La Motte.

Hdqrs., D, F, G, H, and I, Ft. Wingate, N. M.; K, Ft. Leavenworth, Kas.; A and B, Ft. Bayard, N. M.; C and E, Ft. Stanton, N. M.

The leave granted Capt. John B. Guthrie is extended ten days (S. O. Jan. 6, H. Q. A.)

Capt. John B. Guthrie, on leave, will report to the Supt. Recruiting Service, New York City, to conduct recruits for the 10th Cav. to Arizona. On the completion of this duty he will join his company (S. O. Jan. 6, H. Q. A.)

1st Lieut. William W. Tyler will report to Brig.-Gen. Wesley Merritt, president Army Rething Board at Fort Leavenworth, for examination by the Board (S. O. Jan. 7, H. Q. A.)

## 14th Infantry, Colonel Thomas M. Anderson.

Hdqrs., B, C, D, E, F, G, and H, Vancouver Bks., Wash. T.; A, Ft. Townsend, Wash. T.; K, Ft. Klamath, Ore.; I, Ft. Leavenworth, Kas.

2d Lieut. F. F. Eastman, having reported at Dept. Hdqrs., will return to Fort Canby (S. O. 191, Dec. 26, D. Columbia.)

## 15th Infantry, Colonel Robert E. A. Crofton.

Hdqrs., E, F, G, and K, Ft. Buford, D. T.; A, C, D, and H, Ft. Randall, D. T.; B and I, Ft. Pembina, D. T.

2d Lieut. Marcus Maxwell will proceed from Fort Buford, D. T., to Camp Poplar River, M. T., for temporary Court-martial duty (S. O. 1, Jan. 3, D. Dak.)

Leave for one month is granted 2d Lieut. Robert C. Williams, Fort Randall, D. T. (S. O. 2, Jan. 7, D. Dak.)

Ordinary leave of absence for fifteen days, from Jan. 9, 1888, is granted 1st Lieut. Alexis R. Paxton, in addition to the extension of leave of absence granted him in S. O. 241, Oct. 15, 1887, H. Q. A. (S. O. Jan. 10, H. Q. A.)

1st Lieut. Alexis R. Paxton will, on the expiration of his present leave of absence, report at Albany, N. Y., for duty on recruiting service (S. O. Jan. 10, H. Q. A.)

A furlough for four months is granted Sergt. Edward Goehring, Band (S. O. 3, Jan. 6, Div. M.)

## 16th Infantry, Colonel Matthew M. Blunt.

Hdqrs., B, and H, Ft. Bliss, Tex.; C, Ft. Concho, Tex.; E, Ft. McIntosh, Tex.; I, Ft. Davis, Tex.; A, F, G, and K, San Antonio, Tex.; D, Ft. Ringgold, Tex.

On the mutual application of the officers concerned, the following transfers in the 16th Inf. are made: 1st Lieut. Thomas C. Woodbury, from Co. K to Co. I; 1st Lieut. William C. McFarland, from Co. I to Co. K (S. O. Jan. 10, H. Q. A.)

## 17th Infantry, Colonel Henry R. Mizner.

Hdqrs., A, B, C, E, F, G, I, and K, Ft. D. A. Russell, Wyo.; D and H, Ft. Bridger, Wyo.

## 20th Infantry, Colonel Elwell S. Otis.

Hdqrs., A, B, C, E, F, H, and K, Ft. Assiniboine, M. T.; D, Ft. Maginnis, M. T.; G and I, Camp Poplar River, M. T.

We are indebted to Co. E, 20th Inf., Fort Assiniboine, for a copy of its handsome dinner bill of fare on Christmas Day.

## 21st Infantry, Colonel Henry A. Morrow.

Hdqrs., A, C, E, and G, Ft. Sidney, Neb.; D and H, Ft. Bridger, Wyo.; B, F, I, and K, Ft. Duchesne, Utah (Post-office address via Ouray, Utah.)

Pvt. John MacLurg, Co. G, Fort Sidney, is transferred to the Hospital Corps as a private (S. O. Jan. 5, H. Q. A.)

## 22nd Infantry, Colonel Peter F. Swaine.

Hdqrs., A, B, D, G, H, and K, Ft. Lewis, Colo.; C, F, and I, Ft. Lyon, Colo.; E, Ft. Marcy, N. M.

## 23rd Infantry, Colonel Henry M. Black.

Hdqrs., F, G, H, and I, Ft. Wayne, Mich.; A and B, Ft. Brady, Mich.; C and D, Ft. Porter, N. Y.; E and K, Ft. Mackinac, Mich.

Leave for one month, to commence on or about Jan. 27, is granted 1st Lieut. J. R. Clagett, R. Q. M., Fort Wayne, Mich. (S. O. 8, Jan. 11, Div. A.)

2d Lieut. George B. Davis, Fort Mackinac, will report to the C. O. Fort Brady, Mich., for temporary Gar. C.-M. duty (S. O. 9, Jan. 12, Div. A.)

## 25th Infantry, Colonel George L. Andrews.

Hdqrs., B, C, F, and I, Ft. Snelling, Minn.; A, D, H, and K, Ft. Meade, Dak.; E and G, Ft. Sisseton, Dak.

Appointments, Promotions, Retirements, Transfers, Casualties, etc., of Commissioned Officers of the U. S. Army recorded in the Adjutant-General's Office during the week ending Saturday, January 7, 1888.

## RETIREMENT.

Lieutenant-Colonel Edward Collins, 7th Infantry, January 1, 1888 (not June 30, 1882).

## CASUALTIES.

Colonel Alexander Chambers, 17th Infantry, died January 2, 1888, at San Antonio, Texas.

Colonel Edmund B. Alexander (retired), died January 3, 1888, at Washington, District of Columbia.

2d Lieutenant Edward R. Gilman, 5th Infantry, resigned January 5, 1888.

2d Lieutenant Charles C. Tear, 25th Infantry, resigned January 1, 1888.

## Military Academy.

Upon the report of a Board of Officers that they are physically disqualified for the performance of military duty by reason of defective vision, the following named cadets of the 4th Class are, by direction of the Secretary of War, dis-



charged the service of the U. S.: Andrew Hero, Jr., and David A. Ranzells (S. O., Jan. 9, H. Q. A.)

#### Courts-martial.

The following courts have been ordered:

At Vancouver Barracks, W. T., Jan. 4, 1898. Detail: Col. Thomas M. Anderson, 14th Inf.; Major William E. Waters, Surg.; Major Charles A. Wilcox, 14th Inf.; Capt. Tuohy McGee, 1st Art.; Capt. William S. Starring, Ord. Dept.; Capt. Julius E. Quenton, 14th Inf.; 1st Lieut. John M. K. Davis, 1st Art.; 1st Lieut. Patrick Henson and John Murphy, 14th Inf.; 1st Lieut. Albert Todd, 1st Art.; 1st Lieut. Joseph H. Gustin, 2d Lieut. William P. Goodwin and Charles H. Martin, 14th Inf., and Capt. William E. Burkholder, A. J. A., J. A. (S. O. 192, Dec. 27, D. Columbia.)

At Fort Spokane, W. T., Jan. 4. Detail: Major J. Ford Kent, Capt. George L. Luhn and Thomas F. Quinn, 4th Inf.; Capt. Martin E. O'Brien, 2d Cav.; Capt. Henry S. Torrell, Asst. Surg.; Capt. Joseph Keffe and Henry Seton, 1st Lieut. Edward L. Bailey, 2d Lieut. Silas A. Wolf, Edward H. Browne, and Austin H. Brown, 4th Inf.; 2d Lieut. John T. Nance, 2d Cav.; 2d Lieut. George E. French, 4th Inf., and Capt. Horace Neide, 4th Inf., J. A. (S. O. 192, Dec. 27, D. Columbia.)

At Fort Shaw, M. T., Jan. 5. Detail: Capt. George W. H. Stouch and John W. Hannon, 2d Inf.; Capt. George F. Wilson, M. d. Dept.; 1st Lieut. Fayette W. Roe, Adj.; Frederick Thies, R. Q. M.; Frank P. Avery, and William E. P. French, 2d Lieut. John H. Deacom and James T. Dean, 3d Inf., and 1st Lieut. Frank B. McCoy, 3d Inf., J. A. (S. O. 192, Dec. 28, D. Dak.)

At Fort Thomas, A. T., Jan. 9. Detail: Major Frederick Van Vleet and Capt. Philip L. Lee, 1st Lieut. Edward R. Morris, Asst. Surg.; 2d Lieut. Percy E. Trippe and James B. Hughes, 10th Cav., and 1st Lieut. Robert D. Read, Jr., 10th Cav., J. A. (S. O. 190, Dec. 28, D. Ariz.)

At Fort Grant, A. T., Jan. 9. Detail: Major Anson Mills, 10th Cav.; Capt. William H. Corbuser, Asst. Surg.; 1st Lieut. Levi P. Hunt and George H. Evans, 2d Lieut. Carter P. Johnson and Powhatan H. Clarke, 10th Cav., and 2d Lieut. John B. McManis, 10th Cav., J. A. (S. O. 190, Dec. 28, D. Ariz.)

At Fort Custer, M. T., Jan. 9. Detail: Lieut.-Col. Abraham K. Arnold, Major John M. Hamilton, Capt. Albert G. L. S. M. Max Weisendorff, and Frank G. Upham, 1st Cav.; Capt. Melville C. Wilkinson, 3d Inf.; 1st Lieut. Frank A. Edwards, 1st Cav.; 1st Lieut. Lorenzo W. Cooke and Arthur Williams, 2d Lieut. Haydn S. Cole and Frank G. Kalk, 3d Inf., and 2d Lieut. Daniel L. Tate, 1st Cav., J. A. (S. O. 1, Jan. 3, D. Dak.)

At Fort Bliss, Tex., Jan. 9. Detail: Capt. Clayton Hale, 10th Inf.; Capt. Stevens G. Cowdrey, Asst. Surg.; Capt. George H. Palmer, 1st Lieut. Leven C. Allen, William Lassiter, Q. M., and Samuel W. Dunning, Adj., and 2d Lieut. George I. Putnam, 10th Inf., and 2d Lieut. William H. Johnston, Jr., 10th Inf., J. A. (S. O. 1, Jan. 4, D. Tex.)

At Fort Schuyler, N. Y., Jan. 12. Detail: Major Richard H. Jackson and Capt. Henry F. Brewerton, 5th Art.; Capt. Louis M. Maus, Asst. Surg.; Capt. Seiden A. Day, 1st Lieut. Thomas R. Adams and James C. Bush, 5th Art., and 2d Lieut. Charles B. Wheeler, 5th Art., J. A. (S. O. 7, Jan. 10, Div. A.)

At Jackson Barracks, La., Jan. 16. Detail: Majors John W. Williams and Harvey E. Brown, Surg.; Capt. Joseph G. Ramsey, 1st Lieut. Alexander D. Schenck and W. P. Edgerly, 2d Lieut. Richmond P. Davis and Herman C. Schumm, 2d Art., and 1st Lieut. Robert M. Rogers, 2d Art., J. A. (S. O. 7, Jan. 10, Div. A.)

At Fort Myer, Va., Jan. 13. Detail: Major Louis H. Carpenter, 5th Cav.; Capt. Henry W. Lawton, 4th Cav.; Capt. George F. Anderson, 6th Cav.; Capt. Henry P. Birmingham, Asst. Surg.; 1st Lieut. William H. Smith, 6th Cav.; 1st Lieut. Abiel L. Smith and 2d Lieut. Charles P. Elliott, 4th Cav., and 2d Lieut. Barrington K. West, 6th Cav., J. A. (S. O. 7, Jan. 10, Div. A.)

At Plattsburgh Barracks, N. Y., Jan. 16. Detail: Capt. O. B. Read and Ira Quinby, 11th Inf.; Capt. William O. Owen, Jr., Asst. Surg.; 1st Lieut. John H. Philbrick, 2d Lieut. Charles W. Penrose and Arthur Johnson, 11th Inf., and 1st Lieut. Ralph W. Hoyt, 11th Inf., J. A. (S. O. 8, Jan. 11, Div. A.)

At Fort Mackinac, Mich., Jan. 18. Detail: Capt. Greenleaf A. Goodale and William C. Manning, 1st Lieut. Edward B. Pratt and Lea Feibiger, 2d Inf.; 1st Lieut. Charles E. Woodruff, Asst. Surg.; 2d Lieut. Benjamin C. Worsaw and George B. Davis, 2d Inf., and 1st Lieut. Calvin D. Cowles, 2d Inf., J. A. (S. O. 8, Jan. 11, Div. A.)

At Washington Barracks, D. C., Jan. 16, 1898. Detail: Major Richard Loder, Capt. Lewis Smith, James Chester, Frank W. Hess, John F. Mount, 1st Lieut. Henry C. Dances, Edward Davis, Benjamin H. Randolph, Henry R. Lemly, 2d Lieut. Charles A. Bennett, Louis Osheim, John D. Barrette and Edgar Russell, 3d Art., 1st Lieut. John B. Eaton, 3d Art., J. A. (S. O. 9, Div. A., Jan. 12)

#### Army Boards.

A Board of Survey, to consist of Capt. Edgar Z. Steever, 3d Cav., and 1st Lieut. John E. Myers and 2d Lieut. Edward A. Miller, 3d Art., will assemble at San Antonio, Tex., Jan. 12, to fix the responsibility for the alleged loss of Signal Service and Ordnance property, for which 2d Lieut. Leroy E. Sobree, Signal Corps, is responsible (S. O., Jan. 7, H. Q. A.)

A Board of Officers of the Corps of Engineers, to consist of Lt.-Col. Charles R. Suter and Majors Alexander Mackenzie, Alexander M. Miller, and Thomas H. Handbury, with 1st Lieut. Theodore A. Bingham, Recorder, will assemble in St. Louis, Mo., to report upon the construction of bridges across the Missouri River (S. O. 1, Jan. 10, C. E.)

**Musicians' Swords.**—Upon the question as to whether or not company musicians of infantry should be equipped with swords, the musician's sword is still issued by the Ordnance Department. The only case in which the sword has been abolished is in the case of company sergeants. (Letter A. G. O., Dec. 20, 1897.)

#### DEPARTMENT NEWS.

**Dept. of the Platte—Brig. Gen. George Crook.**

Lander is overjoyed because of information received that Fort Washakie is not to be abandoned. Delegate Carey says: "I was authorized to state that the report put in circulation is without foundation, and is utterly false; that Fort Washakie is not to be abandoned in the near future."

The Secretary of the Treasury has transmitted to Congress a deficiency estimate of \$30,925 to meet losses sustained by Colorado and other Ute Indians last summer by being driven from Garfield County, Col., by the civil authorities.

**Dept. of Arizona—Brig.-Gen. N. A. Miles.**

A band of Apaches, supposed to be the same that escaped from Gen. Miles near San Bernardino ranch at the time of Geronimo's surrender and since raiding southern Sonora, attacked a number of prospectors early in the week and killed two of them.

GENERAL BUTLER's motion in arrest of judgment in the case of the National Home for Disabled Volunteer Soldiers against him was overruled Jan.

12 in the U. S. Circuit Court. The verdict against General Butler was for about \$17,000, and he sought to stay execution by a legal technicality.

(Correspondence of the Army and Navy Journal.)

#### WEST POINT, N. Y.

JANUARY 12, 1898.

The examination was finished on Monday morning and the result made known Wednesday. There is the usual slaughter of the fourth class, twenty-six of whom failed in studies, and one, who was probed by the Medical Board last June, was rejected for "defective vision." Twelve of the third class failed to pass, of whom three were returned back into the fourth class, and the others are recommended for discharge. Only one of the second class was unfortunate, and he was turned back into the third class. No one in the first class failed. It was a sad sight to see so many youthful hopes dashed to pieces against the mathematical, French and English snags in the course.

The first Wednesday afternoon tea, from four till six o'clock, during January, was given by General and Mrs. Parke yesterday afternoon, and was attended by many of the officers and ladies of the post. The tea table was in charge of Miss Parke and Miss Etting, of Philadelphia, and refreshments consisting of tea, ice cream, cake and punch, were served to the guests.

Professor Tillman was the manager of the officers' hop on Tuesday evening. There were a number of strangers present, including Lieut. Ramsey, 9th Inf., and bride; Lieut. Little, 24th Inf.; Miss Etting, Miss Ingersoll, Miss Mitchell, Miss Woodcock, two Misses Hartsborn, Mrs. Green, and Mr. Loyall Farragut.

(Correspondence of the Army and Navy Journal.)

#### FORT RILEY, KANSAS.

More than a month ago the officers met and organized for the purpose of providing and maintaining a series of hops through the winter. It was resolved to have bi-weekly hops with refreshments, alternating weekly with concerts. Subscribers were assessed for the purchase of a mess kit. A kitchen and dining room have been fitted up in the old barracks over the guard house, and we are anticipating a pleasant, sociable time. Their informality makes them delightful to all who come.

Mrs. Jackson, Miss Forsyth and Miss Parker are visiting Leavenworth and St. Joe during the holidays. Mrs. Mann has returned from a long visit East. Lieut. Mann will move into the quarters vacated by Lieut. McClure. Lieut. and Mrs. McClure have gone to Illinois on a two months' trip. Capt. and Mrs. Chaffee, 6th Cav., are sojourning in Junction City. The captain is expecting his nomination ere he returns to the land of greasers. Capt. Pond with Mr. Goding were absent for a few days inspecting the Soldiers' Home at Leavenworth, with the view to perfecting plans for a post mess hall, and the plan of having a common mess for all the troops at the post will be given a trial—if Congress appropriates.

The prospectors for water dug a well near the target range and found an abundance of excellent soft water at a depth of 40 feet. The water comes up to about 20 feet from the surface.

Miss Nicholson, of Washington, D. C., is visiting her brother, Lieut. Nicholson, 7th Cav.

Mrs. Gen. Forsyth received on New Year's and was assisted by Mrs. Edgerly, Mrs. McCormick, Mrs. Gibson and Miss Bulton. All the officers called in full dress at 12.30 p. m., and after the customary greetings were entertained by an abundance of the good things of this earth. The Misses Baché kept open house in the doctor's new quarters. Mrs. Robinson, assisted by Mrs. Paul, made everybody feel that the Happy New Year "had come to stay."

Outside work connected with the construction of the post has been suspended during the cold weather. Mr. Waters, our genial post trader, is up and about; he has been confined to his quarters for several weeks with rheumatism and pneumonia. The farmers complain because they are not permitted to sell their produce at the post as they have done for these many years. The trader claims the right to sell all produce and that he has the means to supply all demands. Consumers, however, like the opportunity to have a first and second choice.

#### FORT OMAHA, NEB.

THE *Excelsior* of Jan. 7 says:

Col. Alexander Chambers, who died in San Antonio, Tex., recently, was a resident of Omaha in 1868, and was a brother of Major Wm. Chambers, now a resident of Omaha. Col. Chambers was esteemed by every command of which he was a member, and was regarded as an estimable citizen as well as soldier.

Miss McParlin received with Mrs. Wheaton and guests on Jan. 2.

Mrs. Thomas Brayton has been visiting her sister, Mrs. Lieut. Sarson.

All the officers of the garrison went to the Paxton and called on Gen. Crook and ladies on New Year's. The toboggan slide is now in first class condition, and Capt. Ames invites all his friends to come out and see him and slide with him.

Gen. and Mrs. Crook gave a New Year's dinner party at the Paxton Monday to the officers of the fort and their wives. The officers appeared in full uniform, and the party was very successful and thoroughly enjoyed by all who participated.

Mrs. Major Butler, Mrs. Dr. Brown and Mrs. Ulio and Miss Kolhauf with Mrs. Dr. Haskin, Mrs. Malloy with Mrs. Abercrombie, and Mrs. Mills with Mrs. Sarson and sister, received their friends Jan. 2.

The announcement of the engagement of Lieut. Wilkins and Miss Annie Kolhauf was given to the public on New Year's Day, and they have been the recipient of numerous congratulations since. The lady is a sister of Mrs. Capt. Ulio, 2d Inf., and Lieut. Harry E. Wilkins is a graduate of last year, whose home is in Des Moines, Ia.

Col. and Mrs. Fletcher gave a "progressive Lotto party" on the evening of Jan. 2, which was pronounced to be one of the pleasantest of the winter. The prizes were very handsome. Mrs. Pickering won the lady's and Lieut. Pickering won the one awarded to the fortunate gentleman.

(Correspondence of the Army and Navy Journal.)

#### LONG ISLAND NOTES.

CAPTAIN CROSSBY P. MILLER, Quartermaster's Department, assumed the duties of Post Quartermaster at Willet's Point, Jan. 1. There being at present no available quarters, a house about a half a mile from the entrance of the post, in the village of Bayside, has been leased for the genial captain and his family.

The torpedo-boat *David Bushnell* has been elevated upon a dock specially constructed for it above high water for the winter and experiments with Sym's fish torpedoes have been suspended for the present.

The new officers' mess-hall and club-room, constructed wholly by enlisted men of the Engineer Battalion, is about completed. It is by far the most imposing structure on the reservation. A chronometer of the value of \$600 will be placed in its front, and the motto of the Engineer Corps, "Es-say-sons," will appear underneath.

There are 121 children of officers and enlisted men at the post.

Buffalo overcoats, fur gloves, and caps have been received and issued by the Q. M. Department to the men of the battalion. They are much prized by members of the guard, who suffered formerly from the piercing winds to which the point is exposed.

Tuesday was a red letter day in the history of Robert J. Marks Post No. 500, Department of New York, G. A. R. This post was instituted in Newtown, Long Island, a little more than three years ago. Mr. John S. Power (Chief Clerk at Headquarters Division of the Atlantic and Department of the East for the past 20 years) was its first commander, and under his able administration it has grown from the smallest to the most enterprising and prosperous post in the District. For the third time, Commander Power was publicly installed last Tuesday night, together with nearly all of the former officers of the post. Delegations were present from most of the Long Island posts, and prominent among the visiting members of the Order were the commanders of Harry Lee Post, of Brooklyn, and George Huntsman Post No. 50, of Flushing. Capt. L. A. Furney, District Inspector, acted as installing officer. After the installation ceremonies were concluded, Officer-of-the-Day William E. Sloum, presented, in the name of his post, a handsome, solid gold post commander's badge to Commander Power. Upon its obverse side were inscribed these words:

Presented to John S. Power from His Comrades of Robert J. Marks Post 500, Dept. of New York, G. A. R.

A sumptuous collation followed, which was enjoyed by all, including many ladies, who had been interested spectators of the installation ceremonies.

(Correspondence of the Army and Navy Journal.)

#### NAVAL ACADEMY.

ANNAPOLIS, MD., Jan. 11, 1898.

THE holiday season seems possessed of extraordinary vitality and will not die out despite the departure of holiday visitors. On Wednesday evening last a very pleasant collation was given by the officers in the old mess hall, now used as a dancing room for the instruction of the fourth class. The collation was led by Ensign Gibbons and Miss Dickinson, the guest of Mr. Randall, of Annapolis. Every one speaks well of the music, decorations, etc., but a general complaint was raised concerning the floor, which was sticky from a shellac coating. This is the first of a series to be given during the season.

On Saturday afternoon Mrs. Capt. Bartlett, M. C. gave the second of her pleasant receptions. Many friends called and paid their respects. Mrs. Bartlett will continue to receive on Saturdays.

The officers gave a hop in the gymnasium on Saturday afternoon from 4 till 5.30. It was largely attended, and all seemed to have a pleasant time. The hop would have been given in the evening but for a mistaken impression that the cadets wished to have a "stag" hop at that time. A conversation with the cadets would convince any one that they would greatly prefer to let their stag hops go until their proper season, in order that the gymnasium may be thrown open to the many young ladies now visiting in the yard and city. The cadets have stag hops during October and November and during Lent, and are apparently satisfied with this arrangement. By far the greater number of those attending the "stags" are cadets who attend the regular hops and enjoy them thoroughly. It is to be hoped that the nights which are assigned to the Dramatic Club will be spent in a more enjoyable way for the visitors, when the club has no piece to present. The Dramatic Club has existed only in name this winter, but this is quite excusable, as the Lyceum in process of construction is still unfinished, and is likely to be for weeks to come. In addition to the "stag" on Saturday evening there was a leap year party at Mrs. Commander Huntington's, on Prince George street, Annapolis, and also one at St. John's College in the city. Some cadets and numerous officers attended, but the early hour at which their liberty ended kept most cadets in the yard. Both entertainments were very enjoyable and have added to the pleasures of the week.

On this, Wednesday, evening there will be a leap year german given by the ladies of the yard. It is a success already, and will undoubtedly be the largest given in the yard for years.

The gymnasium has been handsomely trimmed, the band has been placed on its mettle, the collation prepared, and all is in readiness for the evening's entertainment. It is thought that over 100 couples will join in the dance.

The reorganized awkward squad marches to the armory every evening, and is put through its paces by the swordmaster. No one has been removed as yet, but several cadets have had their names placed on the list as a punishment for laughing when some of the squad was passing. A new feature in the way of internal discipline was seen on Saturday last, when several cadets paced up and down the corridors under arms throughout the entire afternoon, as the result of disorderly conduct in sections, while marching to and from recitations. Another cadet of the fourth class has been placed on the *Santee* for smoking. The entire squad quartered on the ship are placed there for the continued use of tobacco, with one exception.

The authorities have, this year, made every effort



to break up the use of tobacco by the cadets. It has been classed as an offence for which ten demerits are assigned and a repetition of the offence is followed by an additional punishment. Probably there is not one-third as much smoking this year as in any previous one.

The list of cadets unsatisfactory or barely satisfactory, for the term has been posted for their notice in the bulletin boards of the cadet quarters. These cadets are notified that they must make every effort during the remainder of the term, as they will otherwise be dropped from the rolls.

Miss Todd, of Frankfort, Ky., recently the guest of Lieut.-Comdr. and Mrs. Todd, has returned to Washington, where she is visiting the family of Capt. R. L. Phythian, U. S. N.

Miss Nellie Thom, of Washington, and Lieut. Mercer, M. C., are guests of Mrs. Capt. Bartlett, M. C.

After taps the other night there was a loud noise in the upper corridor of the cadet quarters, accompanied by the unmistakable sound of people running up and down. The officer of the day stationed on that floor promptly turned out and rushed to the scene of the disturbance. Here he found a cadet of the third class completely out of his head, rushing up and down the corridor with several classmates in hot pursuit. After repeated efforts, a detachment of the football team succeeded in holding down the unfortunate cadet, while the officer of the day reported to the officer in charge for instructions. He was ordered to see the madman taken to the hospital, and four classmates led him over. At latest accounts he was quiet and doing very well. His removal was a source of satisfaction to several classmates who had rooms adjoining his, and to whom he showed a razor before they retired. There are several theories to account for his sudden attack. It is suggested that he is upset by the news that he has recently been bequeathed a fortune by a distant relative, a fact which he learned some time ago. A more accepted belief is the one that the prospect of eight examinations in a week has turned his brain.

The order of semi-annual examinations for the various classes have been posted in the cadets' bulletin boards. They have an ominous look. The first is on Jan. 23, and they close on Jan. 23. The third class has examinations in the morning and afternoon.

Miss Brooks, recently the guest of Mrs. Comdr. Schouler, has returned to her home in New York City.

Miss Calvert, of Baltimore, is visiting friends in Annapolis.

Miss Atwater, of New York, sister of Ensign Atwater is the guest of Mrs. Lieut. Doyle in the Yard. Asst. Engr. Baker, who has been attached to St. John's College for several years, and who has recently been placed on waiting orders, has left Annapolis for Washington, accompanied by his wife and child. Mr. and Mrs. Baker leave many friends behind them, who sincerely regret their departure. Cadet Gaines of the second class has handed in his resignation. Lieut. Comdr. Merry paid the Yard a flying visit last week.

The following Army officers are registered at the War Department this week: Col. Theo. Yates, retired; 1st Lieut. C. W. Taylor, 9th Cav.; 2d Lieut. G. W. S. Stevens, 5th Art.; Major W. R. Livermore, Engrs.; Lieut. Col. John Green, 2d Cav.; Col. Thos. F. Barr, Judge-Adv. General; 2d Lieut. F. V. Kridg, 8th Inf.; Capt. H. P. Kingsbury, 6th Cav.; 1st Lieut. M. C. Richards, 2d Art.; 2d Lieut. F. D. Rucker, 2d Cav.; Col. James Oakes, retired, and 2d Lieut. E. S. Benton, 3d Art.

Under date of Jan. 12, the Second Comptroller of the Treasury decided to settle the claims of officers on the receiving ships *New Hampshire* and *Minnesota* for difference of pay to include Dec. 31, 1897, in accordance with the decision of the Supreme Court, and the Fourth Auditor is directed to pass them for settlement.

## THE NAVY.

### NAVAL VESSELS IN COMMISSION.

#### WHEN AND WHERE LAST HEARD FROM.

**N. Atlantic Station—Rear Admiral S. B. Luce.**

ATLANTA, 2d rate, 8 rifled cannon and 12 machine guns, Captain Francis M. Bunce. At New York.

DOLPHIN, despatch boat, 1 gun. Comdr. George F. F. Wilde. At New York.

GALENA, 3d rate, 8 guns, Comdr. Colby M. Chester. At Norfolk, Va. In dry dock at Navy-yard. An examination and survey showed that considerably over \$20,000 would be required in the construction Dept. to put the ship in an efficient condition for a full cruise; about a similar sum being needed in the Engineering Bureau. After consultation, however, it has been determined by the Chiefs of these two Bureaus, to confine their expenditures to the necessities of keeping the ship in commission for another year, which will accordingly be done.

OSSIPEE, 2d rate, 8 guns, Comdr. W. B. Hoff. At Norfolk, waiting for supplies. Will leave Norfolk soon for a cruise in West Indies.

RICHMOND, 2d rate, 14 guns (f. s. n. a. s.), Capt. Robt. Boyd. At New York.

YANTIC, 3d rate, 4 guns, Comdr. O. F. Heyerman. Passed Fort Monroe, Va., Jan. 5, on her winter cruise. Ordered to visit a number of the Windward Islands, call at different ports along the Spanish Main, and then sail for Aspinwall. The probable time of her arrival at the different ports are as follows: Barbadoes, Jan. 18; Port of Spain, Trinidad, Jan. 25; Curacao Island, Feb. 17; Aspinwall, March 25; Havana, April 7; Key West, April 25; and then home again.

**S. Atlantic Station—Rear Adm. D. L. Braine.**

Mails should be addressed to the care of the U. S. Consul, Rio de Janeiro, Brazil, unless otherwise noted, or care of B. F. Stevens, 4 Trafalgar Square, London.

ALLIANCE, 3d rate, 6 guns, Comdr. Charles McGregor. Arrived at Montevideo, Dec. 15.

LANCASTER, 2d rate, 10 guns, (f. s. a. s.) Capt. S. L. Breeze. At Montevideo, Dec. 15. Under or-

ders to Gibraltar to join European Station. It is reported that Capt. Breeze has been relieved and is on his way home, having been condemned by medical survey.

TALLAPOOSA, 3d rate, 13 guns, Comdr. F. W. Dickens. Reported by cable to have arrived at Montevideo, Dec. 15.

**European Station—Rear Adm. Jas. A. Greer.**

Mails should be addressed to care B. F. Stevens, 4 Trafalgar Square, London, England, unless otherwise noted.

PENSACOLA, 2d rate, 16 guns, Captain George Dewey. Arrived at Madeira Jan. 5 and would proceed under sail for the United States.

QUINNEBAUG, 3d rate, 8 guns, (f. s. e. s.), Comdr. W. M. Folger. At Villefranche, France, Jan. 1, 1898.

**Pacific Station—Rear Adm. L. A. Kimberly.**

Mails, unless otherwise noted, should be addressed to care U. S. Consul, Panama, U. S. C.

ADAMS, 3d rate, 6 guns, Comdr. Louis Kempff. Mail matter for the vessel should be sent to care U. S. Navy Pay Office, San Francisco, Cal. Arrived at Apia, Oct. 19, from Honolulu.

ALERT, 3d rate, 4 guns, Comdr. J. D. Graham. At Callao, Peru, to remain.

IROQUOIS, 3d rate, 7 guns, Comdr. Richard P. Leary. Sailed from San Francisco, Jan. 9, to destroy derelict vessels, and returned to Mare Island Navy-yard Jan. 11.

JUNIATA, 3d rate, 8 guns, Comdr. G. T. Davis. Ordered to sail from Honolulu, Jan. 1, for Yokohama, Japan.

MONONGAHELA, Store Ship, 2d rate, 9 guns, Comd. S. H. Baker. Under orders for Paifu. Will sail as soon as practicable. Was at Coquimbo, Chili at last accounts.

MOHICAN, 3d rate, 8 guns, Commander Benjamin F. Day. Address mail to San Francisco, Cal., care of Navy Pay Office. At Honolulu, S. I., Nov. 6.

PINTA, 4th rate, screw, 3 guns, Lieut. Comdr. John S. Newell. At Sitka, Alaska.

THETIS, 4th rate, Lieut. Comdr. W. H. Emory, Jr. Arrived at Mare Island Navy-yard Jan. 9. All well on board.

VANDALIA, 2d rate, 8 guns, (f. s. p. s.), Capt. Henry L. Howison. Is at Honolulu, and to remain.

**Asiatic Station—Rear Adm. Ralph Chandler.** Vessel with (h), address, Mail General Post Office, Yokohama, Japan.

BROOKLYN, 2d rate, 14 guns, f. s. a. s., Capt. Byron Wilson. At Kobe December 8. Probably spend the winter visiting the principal Chinese ports.

ESSEX, 3d rate, 6 guns, Comdr. T. F. Jewell. Sailed from Nagasaki, Japan, Oct. 17, for Caroline Islands; probably there Dec. 6.

MARION, 3d rate, 8 guns, Comdr. N. M. Dyer. En route to the Asiatic Station. Arrived at Acapulco, Mexico, Jan. 5.

MONOCACY, 3d rate, 6 guns, Comdr. Henry Glass. At Yokohama, Japan, Dec. 8.

OMAHA, 2d rate, 13 guns, Captain F. V. McNair. At Chemulpo, Korea, Dec. 6, and ordered to proceed to Panama.

PALOS, 2d rate, 6 howitzers, Lieut. Comdr. J. E. Craig. Was at Chemulpo, Korea, Dec. 10. Will probably remain in Korean waters during the entire winter.

#### Apprentice Training Squadron.

JAMESTOWN, 3d rate, sails, 12 guns, Comdr. Chas. J. Train. At Navy-yard, Norfolk, Va.

MINNESOTA, 1st rate, 24 guns, Captain T. F. Kane. Receiving ship. Foot of W. 27th Street, North River. Entrance from W. 26th Street. P. O. address, Station F, New York.

NEW HAMPSHIRE, 1st rate, 16 guns, sails, Receiving ship of training squadron. Commander F. J. Higginson. Coaster's Island Harbor, Newport, R. I.

PORTSMOUTH, 3d rate, sails, 12 guns, Comdr. Edwin White. Left the Navy-yard, Brooklyn, N. Y., Jan. 11, for Hampton Roads, Va.

SARATOGA, 3d rate, 13 guns, Comdr. Charles H. Davis. At Norfolk, Va. Has been repaired, and will cruise in Chesapeake Bay this winter. Next summer she will be sent to Coaster's Harbor Island, and will be a stationary practice ship.

#### On Special Service.

BOSTON, 2d rate, 8 guns, Captain F. M. Ramsay. At New York Navy-yard.

DESPATCH, 4th rate, Lieut. W. S. Cowles. At New York where she arrived Jan. 8.

ENTERPRISE, 3d rate, 6 guns, Comdr. B. H. McCalla. At the New York Navy-yard. She will make a tour of the world, by way of the Mediterranean Station.

FORTUNE, tug, Lieutenant O. E. Lasher. Arrived at Boston Navy-yard, Jan. 8.

MICHIGAN, 4th rate, 8 guns, Commander H. F. Pickens. At Erie, Pa.

NIPISIC, 3d rate, 6 guns, Comdr. D. W. Mullan. At New York. Ordered on Jan. 11 to sail on a tour of the world via the Pacific Station.

It is officially stated at Bureau Navigation that she is to go around the world via Pacific Station. There is a strong suspicion, however, that when she reaches this station she will remain there for the next three years.

RANGER, 3d rate, 4 guns, Comdr. F. A. Cook. Making surveys on the coast of Southern California. Off San Diego, Cal., Dec. 31.

St. MARY'S, sails, 8 guns, Comdr. A. S. Crowninshield. N. Y. School ship. At New York City.

TRENTON, 3d rate, 10 guns, Capt. N. H. Farquhar. At New York Navy-yard. Has been inspected and is waiting orders for sea.

#### Receiving Ships, Iron-Clads, Etc.

FRANKLIN, 1st rate, 26 guns, Capt. G. C. Wiltse. Receiving ship. At Norfolk, Va.

INDEPENDENCE, 3d rate, sails, 6 guns, Commander J. W. Philip. Receiving ship. At Mare Island, Cal.

RESCUE, 4th rate, Mate Samuel F. Lomax. Used as a fire tug. Washington, D. C.

St. LOUIS, 3d rate, sails. Comdr. Wm. Whitehead. Receiving ship. League Island, Pa.

WABASH, 1st rate, 26 guns. Captain Joseph N. Miller. Receiving ship. Boston, Mass.

VERMONT, 2d rate, 7 guns. Capt. Wm. A. Kirkland. Receiving ship. At New York.

DALE, 8 guns. Commander Yates Stirling. Receiving ship. At Washington, D. C.

PHLOX, Naval Academy Tug. Mate B. G. Perry in command. At Annapolis, Md.

MAYFLOWER. Mate H. Kuhl, commanding. At Norfolk, Va.

The iron-clads *Ajazz*, *Catakill*, *Lehigh*, *Mahopac*, *Manhattan* and *Wyandotte*, are laid up at City Point, Va.

#### Naval Vessels Fitting Out to go into Commission.

*Suotara*—At Portsmouth, N. H. Will probably be assigned to duty on the North Atlantic Station. Repairs have been completed and the vessel is ready for a steam trial.

*Chicago*—At New York Navy-yard.

*Kearsarge*—At Portsmouth, N. H., being repaired. Will be ready for sea about June 10, 1898.

*Hartford*—At Navy-yard, Mare Island, Cal. Repairs will not be made until legislative action is secured.

#### NAVY GAZETTE.

##### Ordered.

JAN. 9.—Commander Wm. Whitehead, to command the receiving ship *St. Louis*, Jan. 15.

Passed Assistant Surgeon Thomas C. Craig, to Naval Hospital, Norfolk.

P. Asst. Paymaster J. D. Doyle, to examination for promotion, Jan. 12.

##### Detached.

JAN. 9.—Captain H. B. Seely, from command of receiving ship *St. Louis* on reporting of relief, but continue duties as Captain of Navy-yard, League Island, Pa.

Ensign A. W. Grant, from the *Trenton*, Jan. 14, and ordered to the Richmond.

Naval Cadets L. L. Young and W. B. Moseley, from the *Galena* and ordered to the Richmond.

Lieutenant Kossuth Niles, from the Navy-yard, Washington, D. C., and ordered as Inspector of Ordnance at the Midvale Steel Works.

Lieutenant Rogers H. Galt, from the Midvale Steel Works and ordered as Inspector of Steel for the new cruisers under construction at San Francisco, Cal.

#### Board of Examination.

Detail of Board to examine P. Asst. Paymaster J. D. Doyle, U. S. N., for promotion: Pay Director G. E. Thornton, Paymaster C. P. Thompson and Paymaster C. D. Mansfield. Assistant Paymaster L. Hunt will act as Recorder.

This Board convened at the Navy Department on Jan. 12, and will continue in session until Feb. 20, unless its duties are sooner completed.

#### MARINE CORPS.

JAN. 9.—Second Lieutenant H. C. Halves, U. S. M. C., is granted leave of absence for two months, with permission to leave the U. S.

First Lieutenant S. H. Gibson has been placed on the retired list.

#### VARIOUS NAVAL ITEMS.

PAYMASTER MACHETTE, U. S. N., who has been stationed at the Norfolk Navy-yard for some time, during which he has made a large number of friends, will be detached on the reporting of his relief, Paymr. H. F. Hinman, who is expected to arrive Jan. 16.

The annual meeting of the Seawanhaka Corinthian Yacht Club is to be held at the Club House on Saturday evening, Jan. 14, at 8.30 o'clock, when the officers and the standing committees of the club will submit their reports for the past year and an election for the officers and the standing committees of the club for the ensuing year will be held.

A BILL was introduced in the Senate Jan. 10 by Senator Edmunds to incorporate the Maritime Canal Company of Nicaragua for the construction of a ship canal from the Atlantic to the Pacific Ocean, through Nicaragua, or partly through Nicaragua and partly through Costa Rica. The capital stock of the company is to consist of 1,000,000 shares of \$100 each, with power to increase the number of shares to 2,000,000.

THE members of the Naval Inspection Board, of which Rear Admiral Jouett is president, returned to Washington from New York, Jan. 11, where they made a thorough inspection of the U. S. steamers *Trenton*, *Enterprise*, and *Nipsic*, now being fitted out for sea. They report that the two last named vessels are in good condition, and will be ready for sea after a few minor repairs have been made. The *Trenton*, however, will have to be put into dry dock again and have her bottom scraped before she can start on her cruise to the South Pacific.

THE Board of Survey, of which Capt. George C. Remy is president, completed their labors on the *Galena* Jan. 6. They found her in much better condition than they expected. Her boilers, it is said, will last another year without repairs, and her hull will be in good condition when the work to be recommended by the board is done. The work to be done will in all probability come within the statutory limits fixed by Congress as the minimum amount to be expended on every vessel for repairs.

A DESPATCH from Washington Jan. 11 says: The Secretary of the Navy has received a report from Comdr. Leary, commanding the *Iroquois*, as regard to the condition of the American colonists in Sinaloa, Mexico. The country is remarkably fertile and productive, and there is every evidence that the colony will be self-sustaining within a year, unless dissension and trouble should break out. The report concludes by saying that the author of the appeals to the Department of State for assistance to save the colonists from starving is an English malcontent who is in no wise entitled to consideration.



THE U. S. Supreme Court did not hand down its opinion in the case of Pay Clerk Hendee on Monday last, as was expected. It may be looked for on Monday next.

THE *Enterprise* left the Yard for a sea trial on Monday last, the principal object being to test the working of the steam steering apparatus recently completed on this vessel, being the first to be applied to our wooden navy.

THE *Trenton* and *Nipsic*, at the Brooklyn Yard, have been inspected and will be reported ready for sea at once. The changes made in the piston fittings of the *Trenton* were found to have worked admirably, the performance of the machinery of this fine ship being satisfactory in all respects.

THE Court of Claims Jan. 9 reported its conclusions of fact in the French spoliation claims arising out of the seizure of the following named vessels: Brig Hope, Richard Tappan, master; schooner Betsy, John Charnock; brig Amelia, Benjamin Houston; brig Betsy, John Cushing; schooner Joanna, Z. Coffin, and ship Venus, Robert Berritt.

THE San Francisco *News Letter*, referring to the recent visit of the British man-of-war *Triumph*, says: "A return ball was given by the officers of the Army stationed at the Presidio, and the hop-room there was the scene. It was very prettily decorated with flowers, flags and foliage. Mrs. Shafter receiving the guests, assisted by several of the ladies living at the post. Dancing, of course, was the rule, the floor being under the efficient charge of Lieuts. Bean, Faison and Mott, and the guests included some of the prettiest girls in the city. The *Triumph* sailed on Monday last for Southern ports and Callao, where Admiral Henegau will transfer his flag to the *Swiftsure*, and he promises to pay San Francisco another visit in her during the year."

#### HOP AT THE BROOKLYN NAVY-YARD.

By those who were so fortunate as to receive an invitation to the "hop" at the Navy-yard, Brooklyn, the occasion will not be soon forgotten. The hop came off in the second story of the huge "Steam Building," not far from the East Gate, Flushing avenue, and was, as might have been expected, a perfect success from beginning to end. The spacious dancing hall was tastefully decorated with flags, bunting, and lights, through the tireless exertions of Drs. Scott and Field and Asst. Engr. Salisbury, and seldom is seen a more successful transformation than that which was presented to the guests as they arrived, where hitherto little beside lathes, planers, and other machinery was visible. The first arrivals were about half-past eight o'clock, and from that hour until nearly eleven the reception committee was kept busy. The following ladies did the honors of the occasion: Mrs. Gherardi, wife of the Admiral; Mrs. Kirkland, wife of Captain Kirkland, of the *Vermont*; Mrs. Moore, wife of Chief Engr. J. W. Moore; Mrs. Robeson, wife of Captain Robeson, of the *Chicago*; Mrs. O'Neil, wife of Comdr. O'Neil, in charge of ordnance. Through the kindness of Admiral Gherardi the fine band presided over by Contorno furnished the music, and never has the Navy-yard been furnished with better dancing melodies. Many Army officers and their wives were among those who filled the broad dancing floor, among the most notable being Major and Mrs. Randolph, Captain and Mrs. Morris, Col. and Mrs. Tompkins, Col. and Mrs. Piper, commanding Fort Hamilton; Captain and Mrs. Fessenden, besides many others from the various posts and forts in the vicinity of New York. A noticeable feature of the occasion was the number of pretty girls present. Of course the Navy was out in full force, and from the *Atlanta*, *Boston*, *Richmond*, *Trenton*, *Vermont*, and even the *Chicago*, came all the officers off duty.

Among the Navy people present were noted Rear-Admiral Gherardi, Captain A. P. Cooke, Captain F. M. Ramsay, of the *Boston*; Captain F. M. Bunce, commanding the *Atlanta*; Captain Kirkland, of the *Vermont*; Captain H. B. Robeson; Colonel and Mrs. Heywood, U. S. M. C.; Chief Engineer Moore; Medical Inspector Bogert, wife, and daughter; Naval Constructor Pook, Mrs., and Miss Pook; Capt. N. H. Farquhar, of the *Trenton*; Passed Asst. Engr. Parks, of the *Atlanta*; Lieut. Spicer, Lieut. Train, Lieut. and Mrs. Nickels, Ensign Shindal, Civil Engr. and Mrs. Asserson, Miss Asserson, and Miss Annie Asserson, Miss Moore, Miss Minnie Moore, Mr. Clarence Moore, and Miss McGovern, Capt. and Mrs. Robert Boyd and Miss Boyd, Commodore and Mrs. A. E. K. Benham, Lieut. and Mrs. L. J. Gulick, and a host of others.

Dr. Henneberger, Lieuts. Tremain and Velder, as well as Drs. Scott and Field and Mr. Salisbury, as floor managers and ushers, tended greatly by their untiring zeal and good judgment to render the affair the success which all voted it.

The well-known caterer Mares, without whom no affair of this kind is regarded as certain of success, furnished the collation, which was not the least successful part of the evening, and after its discussion dancing was kept up as long as Contorno could be induced to remain on the ground.

The ladies of the Navy-yard are entitled to unstinted praise for the successful way in which the whole thing has been carried on. Less than a month ago the idea was first broached, and the three ladies who have had immediate control of it all have reason to congratulate themselves on the great return from their exertions. Following this successful breaking of the social ice, it is not unlikely that a second attempt will be made, later on, to repeat the success of this hop.

#### THE NAVY-YARD FIRE.

AMONG the losers by the recent fire at the New York Navy-yard is Capt. T. F. Kane, U. S. N., who is at present commanding the *Minnesota*. Nearly all of his household furniture was stored in the building destroyed, and it will be a total loss, it not having been insured. Much sympathy is expressed for Capt. and Mrs. Kane. The furniture, valuables, etc., stored in the various buildings in the Yard will be speedily put in a state of comparative security against destruction. Mr. George Frothingham, son of Naval Constructor Pook, is also a loser to some extent, having stored some furniture in the ill-fated building, and also, it is said, having lost a considerable sum of money in the drawer of his desk at his

office. Up to the present time no accurate estimate of the loss to the Government has been made, but it will probably not fall far short of \$100,000.

To the Editor of the Brooklyn Eagle:

The following is a clipping from your issue of last evening:

The origin of the fire is a mystery. It was said that one of the draughtsmen under Constructor Pook had a fire in his room Jan. 8, but this is denied by Mr. Pook, who says there was no fire of any sort in the building. It is heated by steam, the apparatus being located in a separate building.

It is a deliberate lie, and as it has been persistently circulated since the fire, I hope you will do me the justice to contradict it. There was no stove, no fire, nor anything from which fire could possibly come, nor had there ever been such, either in the rooms under my control, or in any one of the nine rooms of the building occupied by the Construction Department. The fire did not originate in any of these rooms, but in the third floor occupied by the Navigation Department. GEO. F. FROTHINGHAM, Chief Draughtsman Construction Dept. BROOKLYN, Jan. 7, 1888.

#### THE NAVAL RESERVE.

MR. WHITTHORNE arrived in New York on Saturday evening at 7 P. M., met the regular representation of Merchants and Yachtmen Committee on Naval Reserve, read his bill to them, had their plan or suggestions read to him. Both were discussed at length, and a full interchange of views followed. The State system for a naval militia was agreed upon, and the best plan for a deep sea naval reserve substantially agreed upon, there being no difference of opinion except regarding minor details.

The matter of subsidies to encourage the restoration of American shipping will be left to another Congressional committee than the Naval Committee, which will have the Naval Reserve bill in charge. If the mileage bill should become a law, the officers and men of such vessels as enjoy the mileage would then come under the regulations regarding the Naval Reserve, these vessels being built under naval supervision to act as auxiliary cruisers.

Mr. Whitthorne's visit was but a short one of only six hours in New York, as he returned to Washington by the midnight train of Saturday. The bill concerning the yachting service we have already published. That for the Merchant Marine is as follows:

A Bill to create a Naval Reserve of auxiliary cruisers, officers and men from the merchant marine of the United States.

Be it enacted, etc., That annual compensation, based on the tonnage, indicated horse-power, and steaming distance, shall be paid to the owners of such steam vessels now built, or which may hereafter be constructed and which shall be engaged in the coasting or foreign trades and sailing under the flag of the United States of America: *Provided*, That they shall be constructed according to the requirements of the Secretary of the Navy, or be pronounced suitable for armed auxiliary cruisers by a board of Naval officers to be appointed by the Secretary of the Navy, and for such use subject to annual inspection.

Sec. 2. That steamers so selected or constructed shall be capable of mounting not less than two rifled guns of modern construction, shall be designated auxiliary cruisers of the first class or second class, and as such shall be specified in the Naval Register.

The vessels so selected shall be prepared and fitted at the expense of the United States to carry the necessary equipment and guns when needed under such regulations as the President may approve: and for this purpose the owner of such vessels shall afford every facility for such preparation consistent with the continuous use of such vessels in the merchant marine.

Sec. 3. That the amount of compensation to be paid for the prospective use of such auxiliary cruisers shall be 30 cents per ton for run of 1,000 miles or an equivalent compensation in a payment per ton gross register tonnage of ship per annum: *Provided*, That steamers engaged in the coasting trade of the United States shall be allotted one-half the compensation recommended for steamers of corresponding class in foreign commerce.

Sec. 4. That vessels so classed, the owners of which shall accept the compensation, shall at all times be at the disposition of the Government, and may be transferred temporarily or permanently to the Naval Service whenever the President may consider it necessary, with or without the officers and crews; and compensation for such use and transfer shall be determined by a commission to be agreed upon by the Secretary of the Navy and the owners of such vessels transferred: *Provided*, That compensation for vessels which may be temporarily transferred shall be made monthly, and that in no case shall compensation be for a less period than three months.

Sec. 5. That such steam yachts owned exclusively by citizens of the United States, as shall have been pronounced suitable for armed auxiliary cruisers by a Board of Naval Officers, to be appointed by the Secretary of the Navy, and as shall be for such use subject to annual inspection, and shall by their respective owners be placed at the disposition of the Government to the extent, and under the terms provided for by the 4th section of this act, shall be entitled to fly the ensign to be determined by the Secretary of the Navy, as set forth in the 7th section hereof.

Sec. 6. That the President may accept the services of any person or persons desiring to enroll under this act into the U. S. Naval Reserve.

That the President may prescribe the terms, conditions, regulations, and emoluments, including commissions and rank under, and for which, the services of such person or persons shall be accepted, rendered, and compensated; and that when, in the opinion of the President, a sufficient number of qualified persons shall have so offered services which shall have been accepted under this act it shall be the duty of the Secretary of the Navy to detail a sufficient number of officers of the Navy and to place at and for a reasonable time in each year in convenient harbor or harbors of the sea or lake coast of the United States a ship or ships of the United States for the drill and instruction of persons enrolled in Naval Reserve under this act and

may order the instruction of such persons at any educational establishment of the United States at such time, and under such terms, as may be deemed suitable and convenient.

Sec. 7. That the President may disband or discontinue the services of any member or members of the Naval Reserve whenever it seems to him expedient to do so. That any yacht owned exclusively by a person enrolled under the provisions of this act shall fly an ensign to be determined by the Secretary of the Navy, which ensign shall represent the full rights and be recognized as a flag of the United States, and all such yachts in case of war, or other emergency, be at the disposition of the United States under the terms as to compensation set forth in the 4th section of this act, and all such yachts shall be exempt from all requirements as to licenses, seal-letters, clearance papers or harbor, or other dues, while lawfully flying the ensign of the Naval Reserve.

#### NAVAL VETERAN LEGION OF CALIFORNIA.

THE Naval Veteran Legion of California held a well attended meeting on Saturday evening, Dec. 31, for the purpose of electing officers, discussing the merits of the proposed Naval Reserve bill, and also Congressman W. W. Morrow's bill for the establishment of a naval training ship on that coast.

The meeting was called to order by Commander Martin Murray, of the U. S. ironclad *Roanoke*, who was re-elected Commander; S. A. Withington, Executive Officer; James Anderson, Paymaster, and E. G. King, Secretary. Delegates to the Naval Convention—Martin Murray, D. F. Kelley, David A. Hall, who are authorized to represent the Naval Veteran Legion of California in Philadelphia on Jan. 13th, 1888.

After the election Mr. D. F. Kelley, who is now Chief Engineer of the U. S. revenue cutter *Corwin*, in a neat speech thanked the Legion for the honor conferred on him, and stated that after an absence of three years he intended to visit the Eastern States and attend the Naval Convention in Philadelphia, after which he would visit Washington and would use his influence in securing a provision in the Naval Reserve bill that naval veterans who served during the War should be given preference, if physically qualified. He also approved of Mr. Morrow's Training Ship bill. He said that if we wanted good men for the Navy, there is no better way than by training them to the standard of naval discipline.

Quite a large number of naval officers were present, and manifested great interest in the meeting.

#### SEA RHYMES.

ROBERT LINDSAY, the poet of the U. S. S. *Lancaster*, thus appeals to the powers that be:

The voice of your seaman, Uncle Sam, don't forget  
To provide him with something to keep out the wet;  
Since the year '66 he has had a hard struggle  
To resist the temptation bad liquor to smuggle.  
Remember the tars in the rain and the fog  
They for twenty-three years have been without grog.

Of Capt. Potter, who left the ship before the end of the cruise, from which she has lately returned, he says:

Amongst the best you take your stand,  
And when you reach your native land,  
Then, dearer friends you'll meet,  
And I shall picture in my mind  
The happy home you're sure to find,  
With your domestic fleet;  
And everyone on board this craft,  
No matter whether fore or aft,  
When some one else has got her,  
Will often say, though miles away,  
"Good luck to Captain Potter."

The little volume, in which we gathered these sea rhymes, concludes with the following:

Homeward bound! homeward bound!  
Isn't it a joyful sound,  
Clear away the jib and sparker,  
Call all hands and get up anchor,  
Wheel and headmen at their stations,  
And crews of ships of foreign nations,  
Cheer us as we steam around,  
Cheer us, we are homeward bound.

#### BIRTHDAYS IN THE SERVICE.

The following officers of the Navy and Marine Corps celebrate their birthdays this week:

	Born.	Retires
A. J. Kenyon, Chief Engineer.....	Jan. 11, 1837	1890
F. V. McNair, Captain.....	" 12, 1839	1901
J. F. Tarbell, Paymaster.....	" 8, 1840	1903
G. W. Melville, Engineer in Chief.....	" 10, 1841	1908
L. Kingsley, Lieut. Commander.....	" 12, 1846	1903
W. W. Kimball, Lieutenant.....	" 9, 1848	1910
R. W. Galt, Passed Asst. Engr.....	" 13, 1848	1910
R. G. Davenport, Lieutenant.....	" 11, 1849	1911
W. Kellogg, Lieutenant.....	" 12, 1849	1911
H. S. Waring, Lieutenant.....	" 9, 1850	1912
C. A. Foster, Lieutenant.....	" 12, 1850	1912
E. Z. Derr, Passed Asst. Surgeon.....	" 12, 1851	1913
J. C. Byrnes, Passed Asst. Surgeon.....	" 12, 1851	1913
H. P. McIntosh, Lieutenant.....	" 12, 1852	1914
J. R. Edwards, Passed Asst. Engr.....	" 9, 1853	1915
J. M. Steele, Passed Asst. Surgeon.....	" 11, 1853	1916
E. J. Dora, Lieutenant.....	" 12, 1854	1916
C. H. Matthews, Cadet Engineer.....	" 10, 1857	1919
L. W. Reynolds, Lieutenant (Jr. grade).....	" 12, 1857	1919
M. E. Oliver, Asst. Paymaster.....	" 12, 1858	1920
W. A. Gill, Ensign.....	" 8, 1859	1921
A. T. Woods, Asst. Engineer.....	" 9, 1859	1923
L. D. Miner, Asst. Engineer.....	" 14, 1859	1927
W. L. Howard, Ensign.....	" 10, 1860	1923
J. G. Tilden, Carpenter.....	" 10, 1861	1928
L. L. Martin, Carpenter.....	" 12, 1868	1910
H. Bigby, Carpenter.....	" 7, 1868	1915
W. F. Spicer, 1st Lieutenant M. C.....	" 10, 1861	1915

J. C. WHITTAKER, the former colored cadet at West Point, now a practicing lawyer at Sumter, S. C., was orator of the day during the emancipation celebration in that place on Saturday last.

"We don't care much to annex Hawaii," says the *Alta*, "but the King would find a residence in San Francisco much more to his taste than vetoing bills and licensing opium sales in Honolulu. There are also four kings here who are old friends of his and would help to while away the time."



## EX-GENERAL OFFICERS.

Of the ex-soldiers of the war Gen. James H. Wilson lives in Delaware, Gen. N. P. Banks in Boston, and Gen. Alfred Pleasanton in Philadelphia; Gen. Don Carlos Buell is pension agent at Louisville; Gen. Alex. S. Webb is president of the College of the City of New York; Gen. W. F. Smith is a civilian employee in the Engineer Service of the Government; Gen. Lew Wallace lives at Indianapolis (Crawfordsville) and is writing books (he is one of the most successful of modern novelists); Gen. Jos. B. Carr engineers a chain cable manufactory at Troy; Gen. W. W. Averell, the cavalry leader, is at home in Bath, N. Y.; Gen. Chas. H. Devens is Judge of the Superior Court at Boston.

Gen. John F. Hartman, ex-Governor of Pennsylvania, lives at Philadelphia; Gen. W. B. Franklin is president of the Colt's Arms Co., Hartford; Gen. George Stoneman, ex-Governor of California, owns large grazing lands in that State; Gen. J. W. Bartlett, who received Lee's arms at Appomattox, is Deputy Commissioner of Pensions at Washington; Gen. Franz Sigel is pension agent for New York; Gen. H. W. Slocum lives in Brooklyn and is engaged in business enterprises; Gen. W. S. Rosecrans is Register of the Treasury; Gen. Daniel E. Sickles lives on Fifth avenue, and is looking after New York's interest in the Gettysburg memorial work.

Gen. Thos. Ewing, Gen. Wager Swayne, Gen. Burnett, Gen. Henry E. Davies, Gen. F. C. Barlow, Gen. Henry A. Barnum, Gen. J. S. Cathin, Gen. Rush C. Hawkins, Gen. Joseph C. Jackson, Gen. H. C. King, Gen. H. E. Treman, Gen. Stewart L. Woodford, are practicing law in New York.

Gen. Russell A. Alger is ex-Governor and a benevolent millionaire of Michigan. Gen. Frank Fessenden and Gen. Joshua L. Chamberlain reside in Maine; Gen. Lucius Fairchild in Wisconsin. Gen. Adelbert Ames resides in New Jersey, bankrupt in fortune. John J. Astor, Brig.-Gen. Vois., is the head of the wealthy Astor family in New York. Gen. John M. Corse is Postmaster of Chicago. Gen. John C. Cox is a Cincinnati lawyer. Gen. Clinton B. Fisk is a New York lawyer and prospective candidate on the Prohibition ticket for President. Gen. Geo. T. Greene is connected with the Dock Department, New York. Gen. Walter Q. Gresham is U. S. Judge. Gen. Brayton Ives is one of the leaders of Wall street. Gen. Frederic T. Loeke and Gen. E. L. Molineux are engaged in business in New York. Gen. Anson G. McCook is Secretary of the U. S. Senate. Gen. Martin T. McMahon is U. S. Marshal for New York. Gen. Eli S. Parker is a Clerk in the New York Police Department. Gen. Edward W. Serrell is a New York Engineer. Gen. Roy Stone is an Engineer connected with the N. Y. Department of Public works. Gen. Chas. A. Whitier is a wealthy broker of Boston.

## BREACH PLUG OF THE 10-INCH GUN.

In regard to the breach plug of the Navy 10-inch gun, an officer at the yard writes:

"The stories of the sticking of the breach plug of the 10 inch gun in this yard are greatly exaggerated and misleading. It is one of those practical obstructions constantly met with in all mechanical pursuits—one of those things which men having a little smattering of theoretical knowledge will condemn, and the kind of thing that practical mechanics alone know they must meet. The gun has what is known as the French screw breach plug; the plug and the thread in the breach are slotted off in longitudinal and parallel paths, the width of the paths being one sixth of the circumference of the plug, so that when the plug is slacked back one-sixth of a convolution, the fraction of its threads come within a slotted groove in the breach, and the fraction of the threads in the breach come within a similarly slotted groove in the plug; the plug is thus released and is freely moved longitudinally out of the gun. In building the gun, the threads were cut and the plug fitted and the marks made for the slotting; the workman made a mistake and slotted that part of the plug where the thread should have been left, and it was not discovered until he had one slot in. There were two ways of remedying the evil; one was to put a liner on the end of the plug and screw it in one-sixth less; and the other was to screw it in one-sixth of a turn more.

"The plug was screwed into its place preparatory to laying off the remaining slot spaces, but on attempting to unscrew it it was found to be nipped. While rigging purchases to unscrew it, the newspaper reporters came. It will be no great job to drill the plug out and make a new one, though the foreman fully expects to be able to unscrew the original one."

## RIFLE PRACTICE—DEPT. COLUMBIA.

MAJOR C. A. WIKOFF, 14th Inf., Inspector of Rifle Practice, Dept. of the Columbia, in his annual report for 1887, says:

"Paragraphs 183 and 186 of the manual authorize sighting shots and the abandonment of uncompleted scores; owing to the elastic interpretation of these paragraphs, great abuses spring from them, and a greater expenditure of ammunition in classification is made, than is strictly authorized, to the disadvantage of the company, commanded by a conscientious officer. If the enlisted man is properly grounded in the preliminary drills prescribed in the manual, he should be a fair shot before firing on the range. Every shot fired on the range should be for record. I earnestly recommend that the number of scores necessary for qualification as sharpshooter be increased from 120 to 150, and that sighting shots and the abandonment of uncompleted scores be forbidden.

"I inspected during the year every range in the Department; reports of said inspections have already been submitted. The period—three months—assigned to practice on the range, is considered to be ample, and in no way interferes with the drill and discipline of the troops. To a marked extent target practice has greatly improved the morale of the Army.

"No complaint has been received of fraudulent marking, and at every post in the Department proper efforts for the avoidance of fraud therein have been made."

He recommends that the next Division competition (Pacific) be held at Vancouver Barracks.

## GENERAL THOMAS C. DEVIN.

GEN. H. C. KING, who was formerly on the staff of the late Thomas C. Devin, delivered a memorial address upon the General at the inauguration of the Brooklyn Post of the Grand Army which bears Devin's name. He said:

"General Devin had all the instincts of a true soldier, and had been favored with a military education he would undoubtedly have stood in the very front rank of our military commanders. Few, if any, officers were in more numerous engagements. His love for military service was very ardent, and he was quite ill at ease when he found his occupation gone. Shortly after his return to New York, and while the re-organization of the Army was in progress, he was invited to the Fifth Avenue Hotel to a reception tendered to General Grant. When he shook hands with this silent hero, Grant asked him if he would like to go into the Regular Army. Devin was quite taken aback, as he had no expectation that he could receive a higher rank than that of Captain, which he was unwilling to take. But when General Grant offered him the position of Lieutenant-Colonel of the 8th U. S. Cavalry, Devin, as he himself related to me, was completely overcome, even to tears.

"The social side of his character was equally notable, and he received the earnest respect and affection of those most intimately associated with him. Devin was not a young man when he entered the Army, but was quite gray, with a very gray moustache and whiskers, which won him the sobriquet of 'Old Devin,' and when it reached his ears he cut off the moustache and whiskers because, he said, the role of 'Old Devin' was played out. I think I have never seen a man who seemed to be so utterly destitute of fear as Gen. Devin. He was slightly deaf, although he always seemed to have the faculty of hearing any little side remarks which we did not expect him to hear. But I used to think that the defective hearing might have something to do with his utter disregard of his life and the lives of others, when under a close fire, for when everybody else was under the impression that the rebels were unpleasantly near and the bullets uncommonly thick, Devin seemed to be utterly oblivious that anything particular was going on in his front."

Gen. King read the following letter from Gen. Merritt:

Dear General:

I wish I had the time and talent to tell well all I know and think of Gen. Devin. I was much attached to him, and came to the command of the 1st Cavalry Division consequent on the sickness and death of Gen. Buford, finding Devin and Chapman his fellow brigade commander in the Division in their prime. Gen. Buford thought highly of both these officers, and I learned to appreciate them as well as himself.

Devin I have always regarded with that affection, born of experiences in war which passeth the love of brothers. He was brave, patriotic, uncomplaining and never tiring in the discharge of his duties as a general officer. His old regiment, the 6th N. Y., was infused with his spirit. He never questioned an order, never reasoned as to consequences but went in and fought with all the courage of the Puritan soldier glorying in the justice of his cause. Personally he was above reproach.

As intimated I could say much from personal knowledge of Gen. Devin, and hope some time to be able to give facts to you or some other friend of his who will put them in shape for a lasting memorial to his honor. I am now collecting facts for a sketch of Gen. Buford, which I have agreed to write. Yours truly, W. MERRITT.

## TARGET PRACTICE DUTY.

In connection with the fact that the target practice season has now been reduced to two months, the following remarks by Major E. V. Sumner, 5th Cavalry, Inspector of Rifle Practice, Department of the Missouri, are pertinent. He says: "To gain the present figure of merit in the Army, it has no doubt been necessary to push this part of the soldier's duty to extremity, but I believe a point has now been reached beyond which it is dangerous to go. The duty is peculiar in that it requires at all times the personal interest of officers and men; the danger lies in destroying that interest by making the duty a burden too heavy to bear. There are many officers in the Army willing to sacrifice all other duty to target practice; is it for the interest of the Service that they should be encouraged to do this? On the other hand a majority of officers who really have the interest of the Service at heart, are beginning to question the advisability of more than two months' practice on the range in each season. The rush is over, the excitement attending this new phase of the soldier's duty is dying out, a reaction sure to come can best be met by compromise and by placing this portion of the soldier's duty more in harmony with his other accomplishments as a soldier, thereby relieving the special matter of target practice from attacks, which are already heralded by muttering complaints from overworked officers, and from professional remarks of medical officers on defective eyesight from overstrain, or deafness from concussion.

## COMPETITION FOR THE AMERICA'S CUP.

The London St. James's Gazette says that the next British boat built to compete for the America's Cup will be constructed entirely on American lines and not partly so, like the *Thistle*. Let this be as it may, it is clear that the new deed of gift has produced a very bad impression in all sporting circles in England. It has led to the belief openly expressed that the New York Yacht Club have determined to retain the Cup at all hazards, and that they have surrounded it with conditions making it impossible for any challenger to compete for it on fair or sportsmanlike terms. This should be corrected at once. The New York Yacht Club cannot be permitted to stain the reputation of the American people for fair, sportsmanlike dealing, by a course of narrow self-conceit on the part of a few members. We know that the feeling of a very large majority of the members of the club is entirely opposed to any such method of dealing with the Cup, and that if the new deed of gift had been submitted to the club for discussion on the evening of its introduction, it would

not have been adopted by the club without several important alterations. This was not permitted, however, the Committee simply produced the deed and reported that they had already accepted its conditions, and signed the deed.—*Spirit of the Times*.

## FORT LEAVENWORTH, KAS.

The Kansas City Times says:

On Sunday morning last in the post chapel, Chaplain Barry thanked the congregation for their New Year's gift of a purse containing \$100. He said the large attendance at Sunday school and Bible classes, the large congregations at Divine service, and the large number who partook of the blessed sacrament gave him great encouragement and made his work a pleasure.

Progressive eucbre parties were given by Captain and Mrs. Whipple on Thursday and by Captain and Mrs. Moore.

It is reported that Lieut. Churchill, 5th Inf., is lying seriously ill at his home in Kentucky.

Lieut. W. O. Cory, 15th Inf., has just returned from a two weeks' pleasure tour among the orange groves of Florida. During the trip he visited the towns of Jacksonville and St. Augustine. At the latter point Lieut. Cory was stationed more than seven years ago. He brought back with him many tropical fruits and souvenirs for his friends.

Mrs. Schindel gave a conundrum party last evening to the young folks of the garrison.

Quite a number of post people have been invited to tea this afternoon with Mrs. Anthony.

Mrs. Penrose will entertain friends to-morrow night at progressive eucbre.

It is to be hoped that sufficient of an appropriation will be made by Congress (this session) to replace the miserable old barns called barracks with quarters fit for United States troops to live in. The present set of quarters are a disgrace to the Government.

Mrs. Morrison, wife of Lieut. Morrison, 20th Inf., has left for Manhattan, Kas., to join her husband, after pleasantly spending the holidays with parents, Chaplain and Mrs. McCleery.

A negro servant, named James F. Wilson, gathered up about \$150 worth of clothing, the property of Lieut. S. M. Hackney, 10th Inf., on Tuesday and walked toward the city, where the police promptly nabbed him.

## THE CANTEEN.

The annual meeting of the Canteen will be held at Mazetti's, 807 Sixth avenue, corner 49th street, on Saturday evening, Jan. 14, at 6 o'clock. Lieut. Henry J. Reilly, 5th U. S. Art., will read a paper, and the following proposed members will be voted for: Paymr. Sam S. Wood, U. S. N.; Capt. Fred E. Ebstein, 21st Inf., U. S. A.; Lieut. Wm. H. Carter, 6th Cav., U. S. A.; Lieut. J. E. Bloom, late 4th Art., U. S. A.; Col. Levi R. Barnard, 1st Regt. N. G. S. N. J.; Col. Julius J. Estey, 1st Regt. Vt. N. G.; and the following officers, N. G. S. N. Y.: Col. John T. Camp, Maj. Frederick Gallatin, Lieut. Henry G. Paine, Capt. Wm. H. Kirby and Chas. H. Leland, Lieut. Louis G. Briggs, Capt. Fred. W. Guyer, M. D.; Col. Frederick Kopper, Capt. Augustus P. Delcambre, Capt. N. B. Thurston, Maj. F. Le Roy Satterlee, Lieut. Col. Sam Truesdale, Lieut. Chas. M. Jesup, Capt. James W. Finch and Geo. E. B. Hart, Lieut. Capt. James O'Neil and James M. Smith, Capt. Wm. E. Preece, Lieut. Walter H. Haws and Capt. J. P. Leo.

(From the Pittsburg Dispatch.)

## GEN. GRANT ON TOBACCO.

It was at the tail end of a rather long interview I had with Gen. Grant in the office of the Mexican International Railway Company, of which he was then President, that tobacco became the subject of the conversation. Gen. Grant had been sitting in his favorite fashion, tilted back in an oak arm chair, with his feet resting on the table. He was smoking an immense cigar, the fellow of which he handed to me. It was some time before Gen. Grant's troubles began with the injury to his leg as he was leaving his carriage, and he was in good spirits. Exactly the words that he used I cannot reproduce here, but in effect Gen. Grant said this: "You are a very young man, and I am old enough to give you advice, and I suppose I ought to tell you not to smoke. But looking back at the comfort and refreshment which a cigar has given me through a pretty mixed career—mostly of hard knocks—I have not the face to advise any one to abhor tobacco. It would be ingratitude in me to do so. And I am free to say that even if I knew tobacco was shortening my life, it would take more than my personal desire to live to induce me to throw away my good friend here forever."

## FORT SIDNEY, NEB.

The Democrat says:

The officers and non commissioned officers of Fort Sidney are likely to be kept pretty busy during the next four months. Gen. Crook, commanding the Department of the Platte, has ordered that officers and non commissioned officers at the several posts shall assemble daily, Saturdays and Sundays excepted, for theoretical instruction in Army Regulations, tactics and subjects pertaining generally to their military duties. The order provides further that each officer shall carefully prepare papers on military subjects to be read before the officers and non-commissioned officers. In accordance with this Gen. Morrow assembles the commissioned and non-commissioned officers daily to recite and discuss military subjects. Papers are to be read as follows: Official communications and the care of the musket, by Col. Stone; Night attacks and marches, Lieut. Duncan; Duties of guides in company, battalion and brigade drills, Lieut. Bonesteel; Scouts and scouting, Lieut. Williams; Military topography, Lieut. Parke; Strategy and grand tactics of campaign of 1800, Lieut. Kernan; Military signaling and telegraphy, Lieut. Palmer; Campaigning and selection of camps, Lieut. Parmeter; Guard duty, Lt. Brooke. Dr. Ewen lectures Thursday evening to the hospital attendants at post hospital. Gen. Morrow is preparing for his duties as a member of a board of officers, to meet in Omaha Jan. 11, to arrange military exercises for a month's summer camp of troops.



(Correspondence of the Army and Navy Journal.)

## FESTIVAL AT VANCOUVER BARRACKS.

THE most pleasing event of the holiday season at Vancouver Barracks was a fancy dress party given by Mrs. Col. Anderson to the children. The hall had been beautifully decorated by Quartermaster Sladen, and on Monday evening the youngsters were mustered on the stage of the Sully Theatre—with the curtain down.

In a few moments it rose on a lovely tableau of Lilliputian knights and ladies, little dames of ancient regime, sixteenth century belles, Italian fisher boys, a countess, nights and mornings, snow flakes, tiny shepherdesses, tiny bo-peeps, and little boys blue, a Prince Methusalem and Kate Greenways, imps and elves, naiads and nymphs. Then, to the sounds of sweet music and in the glory of red lights, the fairy procession moved slowly down an inclined plane to the assembly room. "Little Lord Fauntleroy," one of the K. O.'s boys, elegantly costumed, led the merry mystic crew. A tall, graceful girl, as artillery, bearing the battery guidon, brought up the rear. Under the direction of the drum major, a complicated march was made, which was greeted with rounds of applause.

The one who, please excuse us, "carried off the whole bakery" was little Irman Anderson, as the "Grand Duchess of Gerolstein," in a pale pink quilted-satin petticoat, rose-colored velvet bodice—court train, trimmed with a broad band of natural lynx fur; a perfectly fitting bodice, cut pointed back and front, tiny straw-colored braids reaching above the elbows—every detail of the toilet perfectly carried out, even to her little grace's dignified air. The costume of Prince Methusalem, of embroidered white satin, was very rich, and worn by Master Phelps Montgomery, of Portland. A mistletoe bough hung aloft, and was the source of much amusement. Quite a number of children were over from Portland, adding brilliancy and numbers to the Army girls and boys. P. P.

(Correspondence of the Army and Navy Journal.)

## FORT CRAWFORD, COLO.

I SEND you the bill of fare of Co. G, 10th Infantry, at its Christmas dinner:

Oyster soup, crackers, olives, celery, chow chow, pickled cauliflower; salmon, egg sauce; lobster, mayonaisse sauce; roast turkey, roast goose, cranberry sauce, roast chicken, sauce a la chipolata; jellied meat, ox tongue, green peas, purée of potatoes, green corn, carrots, tomatoe sauce, pickled beets; damson preserve, California peaches, Bartlett pears, currant jelly, wine jelly; plum pudding, wine sauce; chocolate cake, marble cake, gold cake, mince pies, peach pies, apple pies, coffee, tea, biscuits, bread, butter. "Young America" cheese.

They didn't do badly; did they? F.

(Correspondence of the Army and Navy Journal.)

## FORT MONROE, VA.

THE steam yacht *Mohican*, of Newark, which has been here for the past week, gave a sailing party to the officers and ladies of the garrison Jan. 7. The party consisted of Col. Royal T. Frank, wife and daughter; Col. Pennington, wife and two daughters; Dr. and Mrs. Brooke and daughter; Major and Mrs. Campbell; Capt. and Mrs. Ingalls and daughter; Capt. and Mrs. Mills. Booth. Lieut. and Mrs. Hubbell, Lieut. and Mrs. Weaver, Lieut. and Mrs. Dunn, Lieut. and Mrs. Hobbs, Lieuts. Treat, Hancock, Hawthorne, Cronkwhite and Brooks, Mr. and Miss Jones. They carried the band with them and went down to the capes and had a most enjoyable time.

(Correspondence of the Army and Navy Journal.)

## FORT RANDALL, D. T.

JANUARY 1, 1888.

THE many Army friends of Mr. and Mrs. D. L. Batt, of Fort Randall, will be grieved to hear of their sad affliction in the loss of two dear little children, within a few short weeks of each other.

Little Jenn, a bright, winsome babe of two years old, was first taken after an illness of only a few days from diphtheria. At the time of her death, the eldest boy, Shannon, was also ill with the same dread disease, and for some days his life was despaired of. When it seemed impossible for him to live any longer, the operation of tracheotomy was successfully performed by Dr. Wm. C. Gorman, our post surgeon, and after a tedious convalescence, in which the little fellow showed the fortitude and manly endurance of a grown person instead of a baby of six years old, he became well enough to sit up all day and even to take several short drives. All looked so bright for him until the result which so often follows such a disease appeared in paralysis first of the palate and throat, and then the muscles of respiration. After a long and brave fight for his life, in which all that loving care could do to assist and alleviate was of no avail, the tired little frame could suffer no more and his pure soul struggled forth from its earthly tenement, and soared above to be forever at rest. The funeral services were held in the Post Chapel, Dec. 30, the Rev. Mr. Cook, of Yankton Agency, officiating, and amid the universal grief of many who have known the child since his infancy, we laid all that was left of dear little Shannon, under the snow drifts beside baby Jenn. Parents can realize the sad affliction into which this happy family have been plunged, losing thus suddenly from their little group of four children, and in many Army homes the tears will fall in silent sympathy when the sad news is heard. E.

## COURT-MARTIAL CASES.

In the case of a soldier of Troop C, 8th U. S. Cavalry, recently tried at Fort Davis, Tex., for disobedience to his troop commander, etc., Gen. Stanley remits the confinement and says: "The testimony shows that the conduct of the sergeant of the guard was overbearing, and that of the troop commander undignified, and that their action incited the man to his unsoldierly and insubordinate course."

Before a G. C. M. at San Carlos, A. T., of which Maj. Anson Mills, 10th Cav., was president, were tried 1st Sergt. Kid, Sergt. As-hi-may-la-ha, Private Be-cho-on-dah, Corp. Navon-quai-say, and Private Markey, Co. A, Indian Scouts. Charge first, mutiny. Specification, that they being duly enlisted soldiers in the service of the United States, and having been disbanded and ordered to the guardhouse by their commanding officer, did disobey said order, and did resist arrest, seize their arms, and open fire upon their commanding officer, and others connected with the military service, and escape. This at San Carlos, A. T., June 1, 1887. Charge second, desertion. Plea, not guilty. Findings, of the first charge, guilty; of the second charge, guilty. Sentence, to be dishonorably discharged the service of the United States, forfeiting all pay and allowances, and to be confined at hard labor at such place as the reviewing authority may direct for the period of their natural lives. The

proceedings, findings, and sentence are approved. The military prison at Fort Leavenworth is designated as the place for the execution of so much of the sentence as relates to confinement at hard labor. In the case of Private Markey the confinement is mitigated to two years. (G. C. M. O. 60, D. Arizona, 1887.)

In the case of a soldier tried at Fort Lewis for attempting to commit larceny from the person of a comrade and acquiescing in the same, the reviewing authority, Gen. W. Merritt, says: "It appears from the record that the position of the witness was taken at Fort Lewis, Dec. 8, 1887; that on Dec. 9 the Judge-Advocate of the court recognizing the fact that such a deposition would be inadmissible, served a subpoena on the witness; that on Dec. 11 the witness failing to appear, the Judge-Advocate received permission to serve an attachment on the contumacious witness; and that on Dec. 12 the Judge-Advocate stated to the court that he had been unable to serve the writ of attachment as the witness had left the State and then requested permission to introduce the aforesaid deposition as evidence. In admitting this as evidence the court committed an error as the 91st Article of War provides only for the taking of depositions of witnesses residing beyond the limits of the State in which the court may be ordered to sit, and at the time this deposition was taken the witness actually resided at the post where the court was convened. On what grounds it was admitted does not appear. The court, after the statement that witness had left the State, should have forwarded the writ to these headquarters with a request that it be served if practicable and then have awaited further instructions. On account of the above irregularities, the proceedings are disapproved (G. C. M. O. 44, Dept. Mo., 1887.)

## REORGANIZING THE ARMY.

THE bill introduced in the House by Mr. Steele, to increase the efficiency of the line of the Army, and for other purposes, enacts as follows:

That each regiment of cavalry, artillery, and infantry shall consist of three battalions of four companies each, and the following officers and non-commissioned officers: One colonel, one lieutenant-colonel, three majors, one adjutant and one quartermaster (to be extra lieutenant selected from the regiment), one sergeant-major, one quartermaster-sergeant, one chief musician (who shall be instructor of music) and two music sergeants.

Sec. 2. That each company of cavalry shall consist of one captain, two lieutenants, one 1st sergeant, five sergeants, four corporals, two musicians, two farriers, one saddler and such number of privates, not exceeding 50 in time of peace and 100 in time of war or other public exigency, as the President may direct.

Sec. 3. That each company of artillery not serving as field artillery, and each company of infantry, shall consist of one captain, two lieutenants, one 1st sergeant, four sergeants, four corporals, two musicians, and such number of privates, not exceeding 50 in time of peace and 100 in time of war or other public exigency, as the President may direct.

Sec. 4. That two companies of each regiment of artillery, to be designated by the President, shall be habitually organized and equipped as batteries of light artillery, and shall constitute schools of instruction for the regiment, under command of a major. Companies so equipped shall be styled "batteries of field artillery," but in time of war or other public exigency any or all the companies of a regiment may be organized and equipped as batteries of field artillery.

Sec. 5. That each battery of field artillery shall consist of two captains, three lieutenants, one 1st sergeant, eight sergeants, eight corporals, two musicians, two farriers, one saddler, and such number of privates, not exceeding 130, as the President may direct.

Sec. 6. That such portion of the Corps of Engineers as may be organized into companies and battalions shall be considered as a part of the line of the Army; and there may be added to the Engineer Battalion as now organized, one chief musician, who shall be instructor of music, and shall receive the same pay as the chief musicians of regiments.

Sec. 7. That in time of peace the eight companies of the 1st and 2d battalions of each regiment of cavalry, artillery, and infantry shall be manned, and the four companies of the 3d battalion shall not be manned. One major and the officers of the unmanned companies of the 3d battalion of each regiment shall be available for details for any and all military duty to which they may be assigned by the Secretary of War. These officers may also be employed, in the discretion of the President, on such other public duties as he may direct, and authorized by existing law. Should any of the officers remain unemployed, they may be placed on waiting orders, with only three-fourths pay.

Sec. 8. That whenever a major, captain or lieutenant serving with troops shall have left the service by death, resignation or dismissal, or shall have been detached for a period of over four months' duration, or selected for staff duty, or granted a leave of absence which, with extensions, will cover a period of over six months, or shall have become permanently incapacitated for active duty from any cause, an officer of the same grade and regiment shall at once be transferred to the vacancy, so that there shall be present for duty with the troops the proper complement of officers: Provided, That all lieutenants of less than six years' service as commissioned officers, who belong to the companies of the third or skeleton battalions, shall be assigned to duty for instruction as additional lieutenants to the active or manned battalions of their respective regiments; and no regimental lieutenant of less than six years' service with troops as a commissioned officer shall be eligible for any detail or assignment away from his command, except by the special order of the President.

Sec. 9. That there shall be instituted and maintained, in accordance with regulations to be established by the Secretary of War, an equitable and just system of transfers and rotation of duties among all the majors and company officers of each regiment; and no officer shall be continued on any staff, detached or special duty for a period exceeding four years, except by the special order of the President.

Sec. 10, 11, 12, 13. That in time of war or other great public emergency the President may, in his discretion, cause the 3d battalion of each regiment to be manned and placed on a war footing, and may organize a fourth or depot battalion, consisting of one major and not exceeding four companies, including a depot company for the Engineer Battalion, these to be employed in recruiting and training recruits. The military band of each regiment and of the Engineer Battalion to consist of 20 private soldiers, to be armed, equipped and thoroughly instructed and trained by the adjutant, the commanding officer, in his discretion, to excuse these men from any other duty, they to receive the pay of privates of engineers of the first class; but they may, in the discretion of the regimental commander, be detailed as musicians and returned to their companies for duty as privates.

Sec. 14. That appointments to original and other vacancies created by this act shall be filled by seniority from the three grades of the service, cavalry, artillery, and infantry; but a vacancy in the artillery shall be filled by the appointment thereto of an officer of any other arm: Provided, That no officer shall be appointed to an original vacancy under this act until he shall have passed the examination provided for in section 25 of this act.

Sec. 15. That there shall be but one grade of lieutenant on the active list; and after the promulgation of this act the preceding section shall have been made, the President is authorized to issue new commissions, all conferring rank of even date, to all first and second lieutenants who may then be in service, said commissions to recite and declare that the persons named therein are invested with the rank of lieutenants in their respective regiments, corps, or departments; relative rank and order of precedence in the new grade of lieutenant shall be the same as that existing June 1, 1887: Provided, That nothing in this section shall be construed as affecting the rank, title, or pay of any officer whose name is borne on the retired list.

Sec. 16. The President shall, June 1, 1888, or as soon thereafter as in his judgment the interests of the service will permit, by the necessary transfers and assignments within each regiment, arrange the proper complement of commissioned

officers and enlisted men to each of the regiments, battalions, and companies. The present cavalry force shall be consolidated into eighty companies, the artillery force shall be consolidated into forty companies, including batteries, and the infantry force shall be consolidated into two hundred companies.

Sec. 17. That all supernumerary first sergeants shall be honorably discharged, unless they elect to remain in service in the grade of sergeant; and all supernumerary sergeants, corporals, musicians, and privates shall be assigned to the organized batteries and companies of their respective regiments, and shall remain so assigned until the number of enlisted men in each organization is reduced by casualty to the number provided for in this act.

Sec. 18. Surplus cavalry horses to be sold at auction, and surplus arms, etc., sold or stored.

Sec. 19, 20, 21. "Trumpeters" to be hereafter mustered and designated as "musicians," and "principal musicians" and "chief trumpeters" as "music sergeants," their pay to remain as now fixed by law. Sergt. majors, Q. M. Sergts., and Post Commissary Sergts., to receive \$30 per month, with contingent additions thereto as are now provided.

Sec. 22. All future promotions shall be by seniority up to the grade of colonel, and subject to a physical examination by a medical board and as to moral qualifications by boards composed so far as possible of officers senior in rank. Officers physically or morally disqualified by intemperance or vice to be discharged; those temporarily disqualified physically to continue eligible for promotion, and if permanently disabled retired; but in all cases where it shall be found that the incapacity is the result of wounds received in action during the late war, the officer's name shall be placed upon the retired list with the rank of the office for which he would have been eligible and to which he would have been promoted if he had not been found physically incapacitated.

Sec. 24. That in time of peace only graduates of the Military Academy and meritorious non-commissioned officers who may have been recommended for commissions shall be eligible for appointment of lieutenant in any regiment or corps of the Army. Appointments to all original vacancies that may arise under the provisions of sections 10 and 11 of this act may be made from the Army, or from civil life, in the discretion of the President.

Secs. 25, 26, 27, and 28. Captains and lieutenants whose duties require them to be mounted, to be furnished with public horses; staff officers and line officers appointed on or selected for staff duty away from their regiments, or on other detached or special duty, if their duties require them to be mounted, to be supplied by the Q. M. D. with facilities to enable them to properly perform their mounted duties, or be furnished with forage in kind for the number of horses actually owned and kept by them in service, as authorized for officers of their rank by existing laws; officers furnishing their own horses to be allowed \$300 a year extra. These sections not to be so construed as to affect in any way the pay in allowances of officers above the grade of captain or holding the rank of field officer. That captains and lieutenants of the Army shall be entitled to the pay herein stated after their respective first six years' service as commissioned officers, \$1,500, and after six years' service as commissioned officers, \$1,500, and after six years' service as commissioned officers, \$1,500, and after six years' service as commissioned officers, \$1,500: Provided, That this shall not affect the pay of chaplains.

Sec. 29. The Secretary of War shall define, in regulations, the circumstances determining the necessity for an officer of the rank of captain or lieutenant to be mounted, and whether such officers shall supply their own horses.

Sec. 30. That there shall be no further appointments of 2d lieutenants in the Signal Corps.

Sec. 31. That in time of peace the total number of enlisted men in the line of the Army, including the non-commissioned staff unattached to regiments, hospital stewards, prison guards, Military Academy detachments, General Service clerks, recruiting parties, recruits, and Indian scouts, shall be, and hereby is, established as a force not to exceed 55,000.

Sec. 32. That there shall be employed, under the direction of the Secretary of War, as many veterinary surgeons, not exceeding 20 in all, as he may judge necessary for the public service, and who shall each receive not to exceed \$100 per month and the same allowances that are granted to a sergeant-major.

Sec. 33. That officers of the Army who have been or who may hereafter be retired from active service by reason of age, length of service, or for disability not incident to the service, shall be paid at the rate of two per centum of the pay of the rank upon which they were retired for each year or fraction of a year's service, by commission or enlistment, in the land or naval forces of the United States, rendered prior to retirement: Provided, That nothing in this section shall be held to apply to officers active or retired, who have been commissioned for distinguished service, brevetted for gallantry in action or for gallant or meritorious services in the face of the enemy, or where the pay of any officer is now provided by special act of Congress, or who has been continuously in the service since July 22, 1861, to date of the passage of this act: Provided further, That in no case shall the pay of an officer thus retired exceed 75 per centum of the pay of his rank when retired.

Sec. 34. That the officers whose names are now or may be hereafter borne upon the retired list shall, from time to time, and at the discretion of the President, be re-examined by a retiring board; and if it shall appear upon re-examination that any officer has become fully qualified for active service, he shall be transferred to the active list and assigned to the first vacancy in the officer's grade which may occur in the army, or in the corps, or department to which the officer belonged with the rank he actually held in the Army at the time of retirement.

Sec. 35. That this act shall take effect June 1, 1888; and all laws inconsistent with or repugnant to this act be, and the same are hereby, repealed.

Messrs. Wm. S. Kimball and Co., of Rochester, N. Y., again favor us with a sample package of their various mixtures of smoking tobacco, and specimens of their excellent cigarettes, put up in the most attractive packages. Now that Mr. James G. Blaine has declared that tobacco is to be classed among the necessities, and not among the luxuries of life, and that General Grant, in the story we publish this week, offers his testimony in behalf of the smokers, the Messrs. Kimball have new encouragement to perfect their various brands of tobacco. Some time ago we handed a well-known naval officer, who was in our office, one of the packages of the "Mellow Mixture" of Turkish and perique tobacco received from the Messrs. Kimball. He was in again this week inquiring where it could be had, declaring that it was the best tobacco he ever smoked. We are not able to furnish all the Navy with their smoking tobacco, as we should be glad to do, but Messrs. Kimball and Co. are both ready and willing. Besides the "Mellow Mixture" they have the "Salmagundi" and "Three Kings" smoking mixtures, the last a blending of genuine Turkish perique and Virginia leaf; also their standard "Van-ity Fair" tobacco.



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In considering the question of giving commissions  
to the ten non-commissioned officers now holding  
certificates as "candidates for promotion," the Sec-  
retary of War recently expressed his intention of  
keeping faith with these worthy young men and in-  
dicated that that was also the wish of the President.  
A sufficient number of vacancies now existing in the  
infantry and cavalry arms for all of them, their  
nominations to the Senate may be looked for daily.

The General Order publishing the tables, exhibit-  
ing the results of rifle and carbine firing of the  
Army for the target year 1887, and showing the  
comparative proficiency attained by the different or-  
ganizations, is now in the hands of the printer and  
nearly ready for issue. It will be the last of the series  
of General Orders for 1887 and will be numbered 79.

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eases, constipation, bile, indigestion, etc., and from a small  
beginning there arose a large demand and sale for it,  
which has ever increased until, after generations have  
passed, its popularity has become world-wide. The  
name of this celebrated remedy is

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To such Americans as have resorted to their use in cases  
of need, commendation is unnecessary. But to those who  
have not used them and have no knowledge of their won-  
derful virtues, we now invite attention.

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the great praise bestowed upon them by high authorities  
renders it unnecessary, even distasteful, to extol their  
merits beyond plain, unvarnished statements.

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trouble, should bear in mind "COCKLE'S ANTI-BILIOUS  
PILLS," and should ask for them of their druggist, and if  
he has not got them, insist that he should order them, espe-  
cially for themselves, from any wholesale dealer, of whom  
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**ARMY AND NAVY.**

**MAJOR-GENERAL SCHOFIELD's** recent annual report  
on the subject of our coast defences has been re-  
ceived with much favor in San Francisco. The  
Report of that city says: "San Francisco ought  
to have 3,000 active, stout young artillerymen,  
ready to man the batteries of the Presidio, Alcatraz,  
etc., whenever called upon, and to hurl shells and  
torpedoes against an approaching fleet of ironclads.  
The friends of coast fortification should be earnest  
in their advocacy of General Schofield's plan, for its  
adoption would transform all our coast militiamen  
and their friends into a constituency important  
for the best and latest developments of coast de-  
fence."

**REPRESENTATIVE TRACY** introduced a bill in the  
House on Jan. 10 appropriating \$1,000,000 for  
the erection of an ordnance gun foundry for the  
use of the Army at Watervliet Arsenal.

**ADMIRAL KRANTZ**, French Navy, has been ap-  
pointed Minister of Marine, and Admiral Gervais  
Chief of the Naval Staff.

**MORE FREEDOM FOR ENLISTED MEN.**

AN innovation has been recently introduced into  
the British Army, which it would be well perhaps  
for us to adopt, with the modifications and restric-  
tions made necessary by the differences in our  
circumstances. The hour of the return of sol-  
diers to their barracks has heretofore been 9 o'clock;  
in some few cases an hour later. The hardship of  
this rigid rule has been considerable in the larger  
English towns; for it debarred the men from vis-  
iting theatres and other places of harmless amuse-  
ment; and they have seen, too, that they, being  
men, were treated as children, and have been, of  
course, not a little galled by the reflection; especially  
the non-commissioned officers and steady private  
soldiers, who felt that they might be reasonably  
treated, and had no wish to abuse any liberty  
given them. It was thought some time ago that  
this system might be relaxed, to the greater happi-  
ness of the soldiers and without injury to discipline.  
Therefore, during the greater part of the present  
year, commanding officers have been authorized to  
extend evening leave to all non-commissioned offi-  
cers and to the best conducted privates. The result  
has been thoroughly satisfactory, the men have been  
gratified, and the extra indulgence has created no  
increase in drunkenness or in any of the minor  
offences.

Acting on this experience, the Duke of Cambridge  
has now made permanent what was before only pro-  
visional and tentative, and has issued a general  
order granting many extended and acceptable privi-  
leges. This order says: "Passes may be granted,  
under the following regulations, to well-conducted  
soldiers to enable them to visit their friends, or to  
remain out after hours; non commissioned officers,  
not below the rank of sergeant, may remain out of  
barracks up to 12 o'clock, midnight, without special  
permission. If they wish to remain out after that  
hour they must obtain leave from their command-  
ing officer, but they are not required to have passes  
within the limits of the garrison in which they are  
quartered. If they proceed beyond those limits  
they must be provided with passes in the proper  
form. Passes should not be granted for periods of  
absence exceeding one week. For longer periods a  
furlough is necessary. Non commissioned officers  
below the rank of sergeant, and very good men with  
one or more good-conduct badges or who have no  
entry in the company defaulter's book during the  
last twelve months, may be granted permanent  
passes up to 12 P. M. Well conducted recruits may  
be granted passes to visit their friends once a  
month, or oftener if possible, from after the last  
drill on Friday until tattoo on Sunday."

These are admirable provisions, in the present im-  
proved condition of the British Army, and will as-  
suredly raise it to a yet higher degree of excellence;  
for they add to the self respect and pride of man-  
hood of the enlisted men, and inspire them with a  
greater interest in their profession; and this will  
inevitably react upon and help to diminish the pre-  
sent popular contempt for the rank and file. The  
changes could not have been introduced forty years  
ago, when the popular fallacy prevailed, that "the  
worse the man, the better the soldier," i. e., the viler  
the desperado, the more willing to risk his life. Untrue  
as this was then, it is still less true now, when the  
character of enlisted men has so greatly improved.  
Young men are no longer lured by the lies of a re-  
cruiting sergeant, tempted into enlisting by drink,  
and bound to the ranks for life by a shilling clap-  
ped into their unsteady hands. The dupe is no  
longer flogged, as then, to repress the natural feel-  
ings of the cheated bumpkin.

The English system of enlistment is now nearly  
identical with, and even better, than our own.  
The recruit is now a volunteer from the first. No  
cajolery or cousinage is permitted. He is told to  
report himself the next day to be attested; if he fails  
to come—and he is free to stay away—he is not  
enlisted. Even if he joins the army, his friends can  
buy him out of it for a few pounds. The Service,  
too, like our own, has been greatly ameliorated.  
Everything has been done to improve and elevate  
the barrack life. Reading rooms have been pro-  
vided. The soldier is encouraged by prizes to be-  
come a clever shot. Flogging has been abolished.  
The tone of the officers in addressing their men has  
been much changed for the better. One circum-



stance has gone far to help this transformation. Formerly the private soldier, as a rule, could neither read nor write. Now an ignorant recruit is an exception. Education has filtered down into the country districts, and night schools in the Army itself have continued the previous teaching.

This gradual rise in the condition of the English and American soldier is of great importance. The more intelligent our soldiers become, the more amenable they grow to discipline; the more readily they understand commands; the more carefully will they avoid drunkenness and the kindred vices which are the chief pleasures of brutal and ignorant men. An army that can find enjoyment in reading, in music, in games, in shooting competitions, in private theatricals and concerts; can stand the toil of the march; or the monotony of camp and garrison life, better than the soldiers of fifty years ago with no pleasure but riot, profligacy, or drink. Lord Wellington commanded men in the Peninsula who fought well, it is true, but who spent half their time—many of them—under punishment. The Provost Marshal was driven night and day with perpetual occupation. Lord Wolseley led soldiers who possessed not only valor but self respect, and who were as remarkable for conduct as for courage.

We have in our Service thousands of men who have no wish but to do the duty well which they agreed to do under their enlistment contract; who may be trusted with the utmost confidence to remember the honor and maintain the character of the regiments to which they belong. Such men are needlessly harassed and mortified by the strict orders which, no matter how trustworthy they may have shown themselves, sends them to bed at 9 P. M. before they are sleepy, and keeps them under watch till getting up time the next morning. This system the English have abandoned. Let us do the same. The rule should still be for the average soldier, bed at 9.30 P. M. But reward the steady, the obedient, the well disposed and well conducted, by giving them the same freedom from restraint which the British service now concedes to be not only of no injury to military discipline, but, on the contrary, much to its benefit.

THE vacancy in the Judge Advocate's Department which is to result from the retirement of Major Asa Bird Gardiner, now in prospect, offers opportunity for an appointment which will greatly strengthen this important department of military administration. The necessity for a proper selection becomes more apparent when it is remembered that the appointee, if he is not over forty years of age, will be the prospective successor of the Judge Advocate General. For the ideal appointee something more is required than familiarity with the military service, and with court-martial practice and military law. The Judge Advocate is the legal adviser of the Department or Division Commander. He should, therefore, be of a judicial habit of mind and thoroughly well read in the law. He should be a learned counsellor and competent to give a legal opinion entitled to respect and confidence. He should be able to meet trained advocates before the civil courts and acquit himself to the credit and advantage of the military service. His knowledge of military matters will be of little service to him there, unless it is accompanied by an equal familiarity with civil usage.

Where is the official who possesses these qualifications and how are we to select him? Not by following the ordinary routine of official endorsement by men whose training and habits of mind do not fit them to appreciate, or pass judgment upon the strictly professional qualifications required in a law expert. Their recommendations are valuable, so far as they go, for we do not wish to see a man selected who is so purely a lawyer that he cannot appreciate the special conditions of the Military Service. Perhaps the difficulty can be met by following the precedents set for us by the Ordnance Corps: first select your man and then subject him to an expert examination to determine his strictly professional qualifications. The matter of appointment is in the hands of the President and the Secretary of War. Both are lawyers by training, are fully competent to judge of the legal qualifications required, and to make proper selection of a board

for the examination of candidates. Open the competition to all officers who can present proper evidence of their fitness in other respects and let us see who is the most competent to maintain the legal status of the Judge-Advocate-General's Department. The requirement of a strict professional examination may diminish the list of candidates somewhat but probably this will not present itself to the appointing power in the light of an unmixed evil.

COMMENTING on the report of Engineer-in-Chief Melville the London *Engineer* says: "Those who believe that nothing right can be done by the British Admiralty, while everything done by the naval administrators of other nations must be right, may learn something from the report—just issued—addressed by Mr. Geo. W. Melville, Chief of the Bureau of Steam Engineering, to the Hon. W. C. Whitney, Secretary of the United States Navy. They will find therein ample evidence that even Americans can make mistakes and perpetrate red tape blunders, quite equal in magnitude to anything that is to be met with at this side of the Atlantic. Mr. Melville is very outspoken, and he uses language which certainly does not lack strength. The more carefully the report is studied the more glaring do the defects in the administration of the affairs of the Republic become. There is nothing in this wretched old worn out country much worse than we can find at the other side of the Atlantic. What do our own naval reformers think of the fact that there are four different departments to supply steam machinery to ships, and that three departments have charge of it in ships in commission. Need we add that the departments do not work harmoniously. No wonder that Mr. Melville advises that changes be made in the system. He is also very desirous, and justly desirous, that full power should often be made. Although 'two wrongs do not make one right,' our own naval administration is not exceptionally bad. We are a very outspoken people, and are never, it would seem, so happy as when we are decrying ourselves. If other naval Powers were less chary than they are of making their affairs public, it would be seen that they are, after all, not better off than we are. At least that seems to be one lesson that Mr. Melville's report teaches."

NOTWITHSTANDING the urgent necessity for the work, there seems to be a great and inexplicable delay in docking the steel cruiser *Atlanta*. This fine craft has been allowed to remain undocked for nearly a year, so that her bottom has grown very foul, and when it is remembered that on her full-power sea trial, with a clean bottom, she made a speed of 16½ knots, it is hard to account for the present delay in cleaning away the accumulations on the bottom which have brought this speed down to less than 10 knots an hour. Not only does this condition of bottom decrease efficiency, and waste coal in the development of useless power, but it is almost certain that more or less permanent injury to the bottom plating will follow such prolonged lack of attention. The experience of all having the care of iron or steel-bottomed craft afloat in salt water, is to the effect that a semi-annual inspection is imperative, a more frequent "sighting of the bottom" being deemed advisable in many cases. In the case of the *Atlanta* an examination of her bottom is required for other reasons than cleanliness, and consequent efficiency. It will be remembered that during the manoeuvres in the vicinity of Newport last summer the ship was aground for some little time, and in returning to deep water several severe bumps on the rocks resulted in considerable injury to the propeller. Since her arrival at New York it has been ascertained that several of the bottom plates were considerably bent and one or two of the water-tight athwartship bulkheads disturbed. Other injuries were received whose extent can only be accurately known after the vessel is out of water. It is said by those familiar with this subject that considerable corrosion will be found to have taken place on those plates bent and scraped while the ship was on the bottom.

REPRESENTATIVE HARMER presented in the House this week the several measures recommended by Commander Schley and concurred in by the Secre-

tary of the Navy, for the retirement, promotion and improvement in various ways of the condition of the enlisted men of the Navy. These measures will probably be incorporated in one general bill by the Committee on Naval Affairs, which, it is to be hoped, will receive early and favorable consideration by both Houses.

#### RECENT DEATHS.

GENERAL ALEXANDER CHAMBERS, Colonel 17th U. S. Infantry, died Jan. 24 at the Menger Hotel, San Antonio, from the effects of a long-standing asthmatic affection. He had been in San Antonio but a short time, whither he had gone to pass the cold season, hoping that the climate would allay a malady which was only accelerated by the rigor of a Northern winter in Wyoming Territory. General Chambers was born in New York in 1833, entered West Point in 1849, was graduated in 1853, and promoted Bvt. 2d Lieutenant of Infantry. In 1855 he was promoted 2d Lieut. 5th U. S. Infantry. He served on the frontier, was in the operations against the Seminole Indians in Florida, and with the famous Utah Expedition. Promoted to a Captaincy in the 18th Inf., in May, 1861, he was on mustering duty in Iowa until March, 1862, when he took the field as Colonel of the 16th Iowa Volunteers. With that regiment he participated in the campaign in Tennessee and Mississippi, and was twice wounded in the battle of Shiloh, being brevetted Major in the Regular Army for his gallantry on that occasion. He was again severely wounded in the battle of Iuka, and was disabled for several months. He took part, however, in the campaign against and siege of Vicksburg, for his services in which he was brevetted Colonel. In August, 1863, he was made a Brigadier-General of Volunteers, and commanded the Vicksburg garrison until February, 1864, after which he participated in Sherman's raid on Meridian. In September, 1866, he was transferred to the 27th Inf., was made Major of the 23d Inf. in March, 1867, and after subsequent service with the 19th and 4th Inf., became Lieut.-Col. of the 21st Inf. in October, 1876, and Colonel of the 17th Inf. in March, 1886. In 1876, while Major of the 4th Inf., he commanded the detachment of Infantry which took part in Gen. Crook's expedition against the hostile Sioux. During the last war between Russia and Turkey, he was sent abroad as military attaché to our legation at Constantinople, to observe the movements of the Turkish forces, and witnessed the terrible struggle in the Shipka Pass.

The funeral took place at San Antonio, Jan. 3d, all the troops in garrison being present to escort the remains to the railroad depot for conveyance to Owatonna, Minnesota. General D. S. Stanley and staff were present, and the pall bearers were Col. Hough, Col. McGonigle, Capt. Richards, Col. Heyl, Major Poole and Dr. Vollum.

The death of this distinguished officer will create great regret in civilian as well as in Army circles. He was chivalrous to a degree, of dauntless bravery and generous sympathies, possessing rare social attributes that made him universally popular, and was a soldier and a gentleman in the full sense of the phrase.

THAT veteran officer, Brevet Brigadier General Washington Seawell, colonel U. S. Army, retired, died at the Berkshire Hotel, Jan. 9, in the eighty-sixth year of his age. His disease was enlargement of the liver, which, combined with a weight of years, caused his death. He leaves only two relatives, his sons Bullitt and J. M. Seawell, who will inherit the bulk of his large fortune. General Seawell was born in Virginia, entered the Military Academy in 1821, and was graduated in 1825. He was a 2d Lieutenant in the 7th Infantry until 1829, serving a portion of the time on engineer duty. He was Disbursing Indian Agent for 1832 to 1834, and was aide-de-camp to Gen. Arbuckle from 1834 to 1836. He saw much active service on the Western frontier during all these years, and won the reputation of being a good Indian fighter. In the Florida Seminole war of 1841 and 1842 he took an active part, and was brevetted major for meritorious and successful services. He also served with distinction with the "Army of Occupation" in Texas in 1845-46, and in the war with Mexico, particularly in the operations about Fort Brown, Texas, at the opening of Gen. Taylor's campaign. As major of the 2d Infantry he subsequently did duty at Jefferson Barracks, Mo.; Fort Hamilton, N. Y., and at Benicia, Cal. In 1852 he was promoted lieutenant colonel, 8th Infantry, and served from that time up to 1860 in Texas. On Oct. 17, 1859, he was promoted colonel of the 6th Infantry and assigned once more to duty at Benicia, Cal. At the breaking out of the war he hastened to apply for active duty, but was retired in 1862 for disability resulting from exposure in the line of duty. From that time until 1869 he served on mustering and recruiting duty. For his long and faithful services in the Army he received the brevet of brigadier general March 13, 1865. He lived on the Pacific Coast for many years, and was for the greater part a resident of Sonoma County, Cal., where he owned one of the largest ranches in the State.



## ALUMINUM BRONZE FOR HEAVY GUNS.

A paper read before the U. S. Naval Institute, Annapolis, Md., Oct. 27, 1887, by Alfred H. Cowles, Lieutenant Austin M. Knight, U. S. N., in charge of the Naval Ordnance Proving Ground, in the Chair, with extracts from the discussion following the reading.

The subject of Aluminum Bronze for heavy guns is so important that we especially commend to the attention of our readers the very full report of the discussion on this subject, before the U. S. Naval Institute at Annapolis, Md., which appears in the last number of the Journal of the Institute, Vol. XIII, No. 4, Whole No. 43. Every one interested should procure a copy of this volume, not only for present reading but for preservative and future reference. We give here the paper of Mr. Cowles which prompted the discussion and follow it with some extracts from that discussion, referring for the full report to the Journal of the Institute, No. 43, as well as to the succeeding number, in which the subject will be continued. Mr. Cowles said:

MR. CHAIRMAN AND GENTLEMEN: The Government of the United States is equipping its fortifications and Navy with new guns. Can we not improve upon the present armaments of Europe, instead of imitating them? If so, it is certainly an achievement worth striving for. I will endeavor to show that, with certain alloys of aluminum, we can increase the life and destructive power, and diminish the cost and weight.

How near can we approach to the requirements of a perfect gun metal? Assuming the carriage takes up the recoil, an ideal or perfect gun may be described as a gun of minimum weight and simplest construction, which shall be able to resist a maximum internal pressure in order to produce a maximum effect. Such a gun must be of one piece, in order to act like a great spring; it should respond very stiffly to the pressure of the powder gases, always perfectly recovering its original form; and its walls should be hard enough to withstand the abrasive action of the projectile. It is impossible to attain perfection. For safety, this great spring should have the property of stretching much beyond its elasticity—thereby danger of violent explosion will be avoided. In practice, a gun must be considered a temporary structure. Its value is measured by its destructive power and its life, as related to its cost and its weight.

In order to make the nearest approach to the ideal gun, we must study the physical properties required of the metal to be used in its fabrication.

First, to withstand a high pressure of the powder gases, the metal around the bore of the gun must have as high an elastic limit as attainable, as it is this property that determines the pressure a gun will stand without distortion.

Second, and perhaps of greater importance, the distance the metal will stretch within its elastic limit, and yet perfectly recover itself, should be as great as possible. This gives the gun the character of a spring. To illustrate: If we take two guns made of different metals, the elastic limit of the metals in each case being the same, but the elastic extension of one being twice that of the other, the latter gun will have twice the power to resist heavy shocks, as it will act in resisting them with the same force through twice the distance.

Third, the metal of a gun should be as ductile as possible; and this ductility must be obtained without sacrificing a high elastic limit and elasticity, especially in the metal immediately surrounding the bore. As it will be shown later, this can be accomplished. The metal around the bore can be made to have great elasticity and a high elastic limit, and that of the outer portions of the gun great toughness. In 1865 Sir Wm. Armstrong stated that not one of 3,000 wrought iron "built-up" guns had burst explosively. Here he labored under the disadvantages of building up the guns, and using a metal of a low elastic limit and low elasticity; but clearly proved the value of great ductility.

Fourth, hardness in a gun metal has ceased to be one of the principal requirements. It is, however, desirable in a metal designed for the smaller sized cannon. It has been quite clearly demonstrated that a steel tube with thin walls can be inserted in the bore of a large gun, and made to withstand the destructive effect of the ball and the powder gases. When once destroyed it can be renewed at small expense.

With these points in view, we shall now proceed to discuss some of the difficulties that have arisen in the fabrication of large steel guns, and see if they cannot be overcome by the substitution of aluminum bronze, or some of the other alloys of aluminum.

In this brief article I need not refer to the many recorded failures of steel guns, and the known instances of cast iron guns surpassing steel in endurance and approaching it in destructive power. The steel gun of to-day is built up of an aggregation of hoops and tubes, one shrunk or forced upon the other, in a vain attempt to carry out Captain Blakely's splendid conception of a gun so constructed that the initial tensions of the metal shall vary from the centre outwards in order to correspond exactly with the variation of strain thrown upon its different parts at the moment of explosion. To accomplish this satisfactorily by building up a gun is generally conceded to be a mechanical impossibility. It is theoretically impossible to realize all the strength of the metal. Mr. Longridge has mathematically demonstrated that in an 8-inch gun, twenty-three and six-tenths inches in diameter, composed of four rings perfectly fitted together, only 80 per centum of the full strength of the metal can be utilized. He has further shown that a mechanical deviation of one two-thousandths of an inch in the proper tension of a ring seventeen inches in internal diameter will render the condition such that this gun is no stronger than it would be were the metal in repose. This calls for such nicety in the work of building up a steel gun that practical men consider it impossible. A failure to learn the exact elasticity of the great masses of metal, variations in

TABLE I.—PHYSICAL PROPERTIES OF GUN METALS NOW USED.

METAL.	Elastic Limit.	Elastic Extension per unit length.	Tensile strength per square inch of original section.	Contraction of Area per centum.	Modulus of Elasticity.	Hardness, U. S. Standard.	Specific Gravity.
	Lbs.		Lbs.		Lbs.		
STEEL. Average properties of one hundred and thirty-seven specimens of accepted gun steel from hoops, jackets, and tubes, oil tempered and annealed, United States Government tests.	51,611	0.00207	96,150	19.96	41.	About 29,000,000	7.86
Same grades of steel not oil tempered and annealed, average of nineteen specimens.	33,140	0.0016	88,000	18.7	31.		7.86
Cast gun steel, German soft, (Alexander Holley, "Ordnance and Armor.")	35,392	0.00096	70,784			200,000	7.8
WROUGHT IRON FORGINGS.							
Highest.	30,000	0.0016	73,000			80,000	7.77
Mean.	18,000	0.00095	53,000	26.			
Heavy forgings, average of seven hundred tests at Sir William Armstrong's works.	23,760		48,160				
CAST IRON.							
Average of four Watertown tests of accepted iron.	17,000	0.0009	90,000	0.168	nil.	125,000	7.25
GUN BRONZE.							
Average of fourteen Watertown tests.	13,214	0.0012	38,995	33.6	33.0		8.12

TABLE II.—PHYSICAL TESTS ON A FEW ALUMINUM ALLOYS.

Alloy tested.	Diameter in inches.	Gross Section in square inches.	Length between marks in inches.	Elastic Limit, pounds per square inch.	Elastic Extension per unit length.	Tensile strength, lbs. per square inch of original section.	Contraction of Area, per centum.	Hardness.	Modulus of Elasticity.	Specific Gravity.	
Al Bronze, old name Special Composition, Cu 80, Al 10, Si 1.....	0.5 0.501 0.501		2 69,749 70,894			114,514 95,396 100,823	4.5 0.5 0.5	.0 .8 2.39		7.56(1)	
Bars cast in sand, Maximum strength sought.....		0.646	1			128,000	.0	.0		(2)	
	0.304 0.315 0.272		1 1 1			97,280 115,290 118,560	.0 .0 .0			(3) (3) (3)	
*Al Bronze, forged at red heat.....	.798 .798	.5 .5	10 10	38,000 41,000	0.00232 0.00259	81,700 87,000	5.2 8.6	11.4	17,544,000 17,241,000	(4) (5)	
A2 Bronze, cast in sand.....	.321	.0809	1			87,510	17.			7.65(6)	
A2 Bronze, forged.....	.309	.199	2			88,830	36.5	43.2		(5)	
A3 Bronze, Composition, Cu 91% per cent., Al 7% per cent., Si 3% per cent. Cast in chill mold.....	.312 .327 .327	1 1 1	6 6 6	21,500 24,000	0.00133 0.0015	69,800 68,000	32.8 18.2	32.1 36.1	13.46 11.8	16,520,000 16,300,000	7.8(5) (5) (5)
Aluminum Brass No. 1. Composition 71% per cent. Cu, 3% per cent. Al, 25 per cent. Zn. Cast in chill.....		1.	6	21,500	0.0018	63,450	11.2	23.	9.2	14,070,000	(5)
Aluminum Brass No. 2. Composition Cu 63%, Al 3%, Zn 33%. Chill casting.....		1.	6	47,000	0.0091	76,500	3.5	8.4	12.6	13,400,000	(5)
Small bars cast in sand. Made by Electric Co.....	.306 .296	1 2	1 2			91,500 88,950	9. 4.	11.4 7.3			(6) (6)

\*Compression tests of Al forged bars 2" x .798" diameter, 160,400 lbs. to the square inch, and 163,600 lbs. to the square inch Watertown, April 29, 1887.

(1) Washington Navy-Yard Tests, Feb. 12, 1886.

(2) Tested at Leeds Forge, England.

(3) Watertown Testing Machine, July 11, 1887.

(4) Watertown tests, April 29, 1887.

(5) Watertown tests, July 11, 1887.

(6) Watertown.

their elasticity, variations in their contraction during cooling, a dulled tool—any one of these causes would be sufficient to make such a small mechanical deviation as the above, which could readily pass unnoticed.

Again we have in a "built-up" gun the destructive effect of vibration. Alexander Holley\* makes the following illustration: If an armor plate, built of a number of layers which are not fastened or welded together be struck by a shot, two kinds of motion will be imparted to it: one tending to drive the plate bodily forward, and the other a wave motion, passing through the plates with a velocity about equal to that of sound through the metal of which the plates are composed. The layer struck will for an instant be reduced in thickness and extended in its other dimensions. When it recovers its original form by its elasticity, it will have in turn compressed the next layer, and so on until the last layer receives the shock. The inertia of this last plate tends to hold it in place until it is compressed. It is then in the condition of a spring, pressing equally in both directions, and resisted by a heavy mass on one side, but only by its own weight on the other, so that it jumps violently to the rear, tending to cause rupture or distortion. Were the plate solid, this tendency to separation would be overcome by the cohesion of the whole mass of the metal. In a "built-up" steel gun the tendency to this phenomenon is the more marked, as the external layers of metal are already under tension, and but a small wave motion is required to cause the metal to pass its elastic limit and cause distortion or rupture.

Another evil, due to vibration, is exaggerated in a "built-up" gun. I refer to crystallization of the steel. To illustrate: It is well known that if a bell be made of two parts nicely joined, it will not give musical note, but instead a deadened noise. This is due to the fundamental vibration, being destroyed by the break in the metal, and the new vibrations formed interfere with one another, producing nodes and discord. A solid gun is to the "built-up" gun as a perfect bell is to the one described. By the present practice, when a gun is discharged, the inner layer of metal is distended almost to its elastic limit. This wave of distension passes outward, and is immediately superseded by a great number of reflections. These reflections are multiplied by the number of layers of metal in the gun, and their directions are governed by all variations in the form of the various parts. The amplitudes of vibrations of all these waves are greatest near the tube of the gun. Although the intensity of the fundamental wave is not great enough to stretch the metal beyond its elastic limit, whenever several of these reflections cross one another, the amplitude of the resultant becomes so great that the metal is

either distorted or ruptured locally, and internal crystallization takes place.

Considering this fact, it would appear that the damaging effect is proportional to the square of the number of internal surfaces. In a tube or gun having homogeneous walls of uniform external and internal diameter, a vibration of the nature we started with would simply pass from the inner service to the external and back again, and so continue until its energy was changed to heat or transmitted to the air, its waves of tension never interfering with their own reflections, so as to distend the metal beyond its elastic limit or tenacity and thereby cause crystallization. Hence it is, that if the nicely calculated adjustment of internal compression and external tension is ever attained in practice, experience has demonstrated that forming the gun of so many parts destroys the result attained, after a small number of discharges. These causes explain what is now called the "phenomenal endurance" of the cast iron smooth bore guns and of the converted rifles, and the fact, as I am told, that the Krupp Company will only guarantee their "built-up" steel guns to stand seventy-five service charges. Our Government has the record of several hundred 10-inch cast iron guns converted into 8-inch rifles, no one of which has ever failed.

In order to learn further the efficiency of a solid gun as compared to a "built-up" gun, we shall compare the powder pressure attained in practice in cast-iron guns with that attained in steel guns. It is true that the cast-iron guns are now lined with steel or wrought-iron tubes; their endurance, however, was equally marked without the tubes when quicker burning powder was used. On the other hand, the "built-up" steel guns are supposed to have the strength of their walls further developed in them by the principle of varying initial tension. The strength gained by this should be equal to that gained (due to the tube) in cast iron guns, and render our comparison fair.

At the present day, with service charges, cast iron guns have as an average about fourteen and five-tenths tons pressure to the square inch of surface of the bore at the moment of explosion. This is about equal to the tensile strength of cast iron. With steel guns the pressure is about 20 tons, or only 47 per centum of the tensile strength of gun steel. In other words, with a strength of metal three times as great, only thirty-three per centum increase in efficiency is obtained in a "built-up" steel gun over one of solid cast iron, and the latter has far greater endurance.

It must be understood that these pressures are average results. Cast iron guns have repeatedly been known to stand pressures far above the tensile strength of the metal without apparent rupture, but it is doubtful whether a steel gun has ever stood such

\*See Alexander Holley's "Ordnance and Armor," pp. 248, 249.

\*Holley's "Ordnance and Armor," p. 251.



In Table I, we have the average physical properties of the metals now used in the fabrication of guns. Table II, gives us a slight insight into a field of aluminum alloys which up to the present time has scarcely received investigation. On the testing machine at the works of the Cowles Electric Smelting and Aluminum Company, at Lockport, N. Y., higher results have been obtained, and other alloys made in small quantities whose physical properties have surpassed these.

With alloys of these physical properties at command, which can be cast more readily than cast iron, there are two well-tried methods of fabrication that might be employed to give us solid guns of great destructive powers and endurance.

First, the Rodman method of casting in gun and coil, it from the centre during the solidification of the metal. Were this employed, we might adopt the A1 bronze, having a tensile strength of about 100,000 pounds to the square inch, a hardness greater than cast iron, and an elastic limit four times as high. The extension within the elastic limit is over three times that of cast iron; hence, its power to resist shocks would be, as compared to a cast iron gun, proportional to the products of the elastic limits of the two metals into their elastic extensions, or about as 12 is to 1. We should still have some ductility in reserve, which cast iron has not. In casting aluminum bronze by Rodman's method, we should be enabled to overcome one very serious difficulty that existed in casting iron guns. The temperature at which this grade of bronze solidifies is only about 1,600 degrees Fahrenheit, as compared to 2,700 degrees, the melting temperature of cast iron. With this low temperature we could heat the outside of the mold as hot as the molten metal, and thereby cause all cooling to take place entirely from the centre, which we know would be the ideal perfection of the Rodman method of casting guns.

The destructive effect of heat upon gun bronze is a serious objection to the use of that metal. An interesting experiment, performed by Lieut. M. E. Hall, U. S. N. and myself, illustrates the peculiar fitness of this grade of aluminum bronze to overcome this difficulty. There were cast two bars of Al aluminum bronze, attached to the same gate in the sand. One, on testing, developed 100,120 pounds tensile strength to the square inch, and five per centum elongation.

The duct was then placed in the machine and strained till it was resisting 100,000 pounds stress. It was then heated by a blowing flame to a temperature at which cotton waste would char when placed against the bar (about 400 deg. F.), and while so heated the strain was increased to 107,000 pounds to the square inch. It was then allowed to cool down to the temperature of the room and again tested, when it stood 110,162 pounds to the square inch without breaking. On heating the bar again to the temperature of charring waste, it broke at 86,000 pounds, and had developed about four per centum elongation. We concluded that its finally breaking at a lower tensile strength than it had already stood in stress upon it, under apparently the same conditions, was due to an increase in the temperature, or to the fact that the strain of 110,000 pounds had caused a partial rupture. From this experiment we became fully convinced that this grade of bronze retained its remarkable strength through a great range of temperature.

The second, and probably the best method to follow in the fabrication, is one invented by the late Samuel E. Dean, of Boston, which is now used in making cannon from tin bronze.\* In Great Britain, in 1870, the Committee on Field Artillery for India reported in favor of and adopted this method. Our Government Ordnance Bureau ordered guns to be made by the Dean process in July, 1870, and the work was subsequently interrupted in consequence of the neglect of Congress to vote the necessary funds. The Austrian artillery adopted the process in 1873, and since then have used it exclusively. The credit of the invention is there given to Gen. Uchatius. The gun is first cast solid in a chill mold. It is then bored, and conical chilled steel mandrels of gradually increasing diameters are successively driven through the bore by hydraulic pressure. The metal around the bore is thereby given greater strength and hardness, a higher elastic limit, and a greater elastic extension. These properties gradually vary till the outer circumference of the gun is reached, while the metal has its normal condition of great toughness. An exhaustive series of experiments made by Gen. Uchatius resulted in the selection of a bronze for a gun so constructed containing 92 parts copper and 8 parts of tin, this being the copper tin alloy having the greatest combination of strength and ductility. Cast in a chill to cause the tin to form a homogeneous alloy with the copper, he obtained the following properties:

Tensile strength, 43,200 pounds to the square inch; elastic limit, 5,672 pounds to the square inch; elastic extension, 0.0004 per unit length; ultimate elongation, 40 per centum; hardness, 5.

The inner walls of a cannon made of this metal, and hardened by mandreling, developed the following physical properties:

Tensile strength, 60,350 pounds to the square inch; elastic limit, 15,620 pounds to the square inch; elastic extension, 0.00906 per unit length; reduction of area, 44 per centum; ultimate elongation, 16.5 per centum; "hardness nearly equal to that of gun steel" (?).

Were the A3 aluminum bronze substituted for the above (so-called "steel bronze," we would start in the original casting with the following properties:

Tensile strength.....	70,000 pounds to the square inch.
Elastic limit.....	23,000 " "
Elastic extension.....	0.0018 per unit length.
Reduction of area.....	30 "centum."
Ultimate elongation.....	40 " "
Hardness, about.....	13.

By mandreling, the strength of this metal in the bore could be increased to over 100,000 pounds per square inch, and the elastic limit raised to 60,000 or 70,000 pounds. The stretch within the elastic limit would be increased, and, as other tests than those given show, would far surpass that of gun steel. The outer portion of the walls, where the strain is not as great at the moment of explosion, would have a *great reserve of ductility*. It would be impossible to burst such a gun with four times the

powder pressure now used in the steel "built-up" gun. The walls would be solid. There would be no danger of crystallization. No rust or verdigris can form on aluminum bronze. The finished gun would have the color and lustre of gold. It would not be affected by salt water. The fabrication of such guns would not require a great outlay of capital invested in plant, and the mineral resources of our country are capable of supplying in inexhaustible quantities the raw material necessary for the production of the aluminum alloys. Were our Government enabled to make a great advance in the art of gun fabrication before equipping itself with the guns now needed, it would render valueless, against us, the present armaments of Europe.

There is one more point to be considered, viz., the cost of aluminum bronze guns as compared to steel guns. In the following table we see that the average cost of steel guns in Europe is about 53 cents a pound, and of cast iron guns (finished, tubed and hooped with steel) 15 1-10 cents a pound.

TABLE SHOWING THE COST OF STEEL AND CAST IRON GUNS IN EUROPE.

	Steel.		
	Calibre	Weight Cost.	
	in loc'es.	in tons.	per ton.
whitworth.....	9.75	8.02	\$ 824
Krupp.....	13.98	51.18	1,300
Krupp.....	12.	35.42	1,012
Krupp.....	10.23	21.65	941
Krupp.....	5.9	4.97	1,076
Krupp.....	5.9	3.44	1,074
Krupp.....	5.9	3.94	1,176

Average...9.00 18.37 \$1.067, or 53 cts. per pound.

Cast Iron.			
	Calibre in in'os.	Weight in tns.	Cost per ton.
French...	9.45	15.91	\$349
Italian...	9.45	14.91	305
Italian...	9.45	17.02	307
Italian...	12.6	37.40	259
Italian...	12.72	99.	293

Hoopd and tubed with  
steel.

Aver...10.73      36.85 \$902,   or 15.1 cents per pound.

Table compiled from page 97, Report on Heavy Ordnance and Projectiles, Logan Committee, 1883.

In this country these prices would be 40 per centum higher, or about 75 cents a pound for finished steel and 21 cents for cast iron guns. Here we have the data to arrive at the cost of aluminum bronze guns as compared to steel. The cost of fabrication would be about the same as with cast iron. Assuming that the iron in cast iron guns costs 2 cents a pound; deducting this from 21 cents we have 19 cents per pound as the cost of fabrication. Aluminum bronze is on the market at 40 cents per pound. Add to that 19 cents, and we have approximately the cost of the finished aluminum bronze gun as 59 cents a pound. We have shown that the strength of the bronze is so great that the finished gun need weigh no more, if as much, as a steel gun of like calibre. Hence we arrive at the fact that to-day heavy guns of aluminum bronze can be made at twenty per cent. less cost to the Government than like guns of steel; and further, sixty-eight per centum of their cost is represented by capital stored away in the form of a valuable metal that can be remelted and used over any number of times without alteration of its composition.

I close, gentlemen, with the question, Would it not be well for our Government to appropriate ample funds to investigate this promising field, and learn wherein these alloys can be applied in the construction of ordnance and armor?

OPINIONS OF MR. WM. METCALF AND PROF. THURSTON.

The following letter was read by the Secretary and Treasurer, Lieut. Charles R. Miles, U. S. N.:

PITTSBURG, Oct. 19, 1887.

DEAR SIR: I have your esteemed favor of Oct. 17. I am on record as a pronounced enemy or rather opponent, of the "built-up" guns.

Allow me to say, however, that I think there has been enough said on that subject. The built-up system has been adopted by the Government, and, good or bad, I believe it to be wiser for citizens to sustain our officers, and to try to help them to get appropriations enough to supply us with a respectable armament.

Therefore, if I am not attacked I shall oppose no more, until we have a navy and some heavy ordnance; after that is accomplished, if any person wishes to open up a discussion that can do no harm, it will be entirely proper for us all to go at it again.

I shall not be able to attend your meeting, and you are at liberty to use this letter as you may see fit.

Yours respectfully,

WM. METCALF.  
Professor R. H. Thurston, Director of Sibley College, Cornell University, and formerly of the Engineer Corps, U. S. Navy, said:

The introduction of a new system of metallurgical operation in conjunction with the production of a new class of alloys is of such extraordinary importance as to mark an era in industrial history. I regard the introduction of the Cowles methods of manufacture of the aluminum and other alloys as just such an exceptional event, and as one likely to revolutionize, not only the methods of production of this class of alloys, but of many branches of manufactures.

We have watched its development and progress with very great interest from the first, and have been exceedingly pleased with the business-like ways and the scientific methods applied in the building up of this new industry. The application of heavy currents of electricity to the melting of refractory materials, the production of alloys of the most unusual commercial and industrial resistance, the derivation of enormously intense and powerful currents by the use of water power, and thus at minimum cost, is a purely commercial revolution of an importance which can hardly yet be realized. The introduction into our markets of a new material, so singular in its physical characteristics of aluminum, at such prices that they may have a practical application, is one of those occurrences which only very rarely punctuate our social history. The possibility of rendering available for useful purposes numbers of as yet almost unknown elements and compounds which is thus opened up, is of extraordinary interest and promise, the outcome of which must be entirely beyond our present view or conception; which may probably be paralleled only by such events as the production of cast iron by Dudley, of wrought iron by Cort, of steel by Huntsman, or the modern "ingot iron" by Bessemer.

tion as to its success must be the commercial one, and that must be settled by actual business in the markets of the world. It is gratifying to be assured by the inventor that this is no longer a question, and that the possibility of making such alloys as they have produced, and of being able to put them in the market at fair prices, and at a moderate profit, has resolved itself into a certainty. This being the case, the introduction of the process and of its products would seem to be as well assured as any matter of business can well be. The last is a subject of prime importance where it is proposed to make application of the alloys as made in the construction of ordnance. It would be unwise to venture upon predictions as to the final outcome; but that at least may be said, that we may expect much from so radical an advance in metallurgy, and that we may reasonably hope for almost as great results in the production of alloys as came, in another field, from the invention of the great metallurgical processes which now give to the world its various ferrous products.

Considering the application of the newly available alloys to the construction of ordnance, it is first necessary to determine what are the essential qualities of ordnance metal. These I should state in the following order:

1. Tenacity sufficient to meet safely the maximum pressures and stresses due to the heaviest charges and quickest powder to be employed in the gun made of it.

3. Hardness sufficient to bear the abrasive action of the shot and its shearing action on the lands of the bore.

4. Elastic "resilience" such that it may not be in the slightest degree deformed by the shock of successive charges.

5. Power to retain the useful and essential qualities which have been above described, at all temperatures, which may be attained in the most rapid firing, even approaching the red heat if possible.

The demand should be for a metal having the greatest possible strength consistent with sufficient hardness and tenacity; the elastic limit being exactly specified at a point in excess of the maximum pressures to be met with, and a minimum figure being given for the elongation to be secured. Steel of 0.80 per cent. carbon has an elastic limit, in good samples, of not far from 50,000 pounds per square inch. Its elastic resilience is not far from 4,000 foot pounds per cubic inch, and its ultimate tensile extension of 15 per cent. I should say, metal or alloy, which is capable of such an extension and of exhibiting such tenacity, in equally large masses, and which at the same time is not too costly in production and application to this purpose, should be considered as a candidate for similar position among the

The question whether a gun shall be solid or "built-up", is, I consider, to be decided by a consideration of the possibility and the practicability of carrying out the manufacturing process approaching the maximum strength of the material as exhibited when used on a small scale. It is not ordinarily possible to secure such tenacity when working in wrought iron, and it is only possible when using steel, by the adoption of the Whitworth or an equivalent process of compression or solidification. With the cast metals, also, it is not usual to secure the equivalent strength on a small scale, and in large masses. But could this natural resistance, if I would call it, be secured in the solid, as distinguished from the "built-up" gun, there is no difference of opinion as to its desirability to utilize it in one, rather than in a composite, piece. A built-up gun may be taken as an attempt to correct one wrong by the introduction of another; to balance a lack of tenacity produced by the ordinary methods of solid gun construction with the tenacity of the steel, and to a certain extent, dangerous assemblage of parts, each of which possesses more nearly the desired tenacity.

In choice of material and of method of construction, therefore, I would most certainly look for a strong and tough metal which could be easily and inexpensively worked into large masses of uniform and maximum strength. The best and the only satisfactory illustration of such construction is the gun barrel of the high velocity gun, and that is not fully satisfactory on account of its cost. As regards weight, I should say that, for a gun which is muzzle loading, and usually therefore allowed necessarily to recoil, a certain weight is necessary and desirable to secure proper control of the gun; but I should say that for a breech-loading gun it is not necessary to have so much weight, and it is safely to be obtained, and to so mount the gun wherever practicable that it shall have no recoil—a system proposed by me years ago, and already adopted for casemate guns and for ironclads, in some instances, by Krupp and others. A reduction of weight being made possible by the introduction of a new material in the place of the old, I should say. The introduction of aluminum bronze, and other alloys containing that curious metal, seems to promise important advance in the arts, and in none more so than in ordnance construction, if we may take the existing figures as indicative of what may consistently be expected of this alloy when it is applied to similar uses.

adapted to meet of a large scale and in varying ordinance. The author has been able to obtain a large number of alloys and have ascertained from various sources, including the Ordnance authorities on metallurgical work, regarding the aluminum alloys, I should say that they are beyond doubt enormously more valuable for ordinance construction than any ordinary bronze, and unsurpassed by any alloy, when properly made, for the purpose of making armor plates. I should say, though I have sometimes found it possible to get extraordinarily high tenacity from the common bronzes by the use of good fluxes and great care in their manufacture, in the manner indicated at the end of Vol. II, of my Materials of Ordnance Engineering, (see also the chapter on Alloys.) I have also in the chapter on the "Koboids," (see also the chapter on metals which will alloy in such proportions as to give tenacities approaching those of the ordinance steel and yet with some ductility; but it requires very nice mixture and man-

Much has been expected, for many years, from the aluminum bronze; but their high cost has hitherto prevented their use, and has even prevented any extended investigation of their valuable properties for such every day purposes as are now proposed by the Messrs. Cowles. But enough has been learned to prove their extraordinary value for many uses. That we shall in some directions be disap-

pointed in our hope of securing remarkable results from them is most likely. It can hardly be supposed that they will prove universally applicable in the arts; but we may certainly, from what we know of them, expect to get good ordnance metals from among these alloys. It was many years ago that the composition of these alloys was superior to common bronzes in every way, and that they had a strength and a ductility combined that at once promised very extensive useful application. Their exceptional stiffness was one of the first properties noted. The ease of working as compared with some of the more common metals is an important characteristic, and the permanence of the polished surfaces in air, or when exposed to gases, is more than an ornamental attribute. This characteristic has peculiar value here, for the alloy should be able to prove to be thoroughly practicable to make rifled ordnance, its ability to withstand the degenerative influences of roasting, discovered by the Messrs. Cowles, is an exceedingly important feature of these alloys; and if it should prove feasible to employ the Dean process of internal hardening and drawing to increase their value, and should this method, which has been found to have such extraordinary value when applied in the construction of common bronzes, also prove to be applicable here, the composition must be admitted that aluminum bronzes, on this point, are superior to all the materials which have yet been introduced and proposed for this kind of work. It possesses, in the best mixture, a tenacity and ductility, an elastic resistance and resilience rivaling the best ordnance steels; its best qualities exhibit sufficient hardness to insure good wearing power, and it can be cast and recast in heavy masses without injury. It is easily worked; is probably capable of profiting by the Dean process, and; in the difference of the coefficient of expansion between it and the more common metals, may probably, if considered necessary, be steel lined. It thus would seem to fulfill the desiderata of good ordnance metals.

▲ gun composed of metal approaching 100,000 pounds in-

\*See pp. 580 to 540, Part 3d "The Materials of Engineering," by Robert H. Thurston, A. M., C. E.



acity, and above 80,000 pounds elastic limit, having measurable extension and ductility, hard, unoxidizable, cheap in construction, and durable under wear, would seem to promise well. It certainly would justify the most careful and extended investigation on the part of ordnance officers.

#### REMARKS OF LIEUT. M. E. HALL, U. S. N.

Lieut. M. E. Hall, U. S. N., on duty at Catakhill, N. Y., said:

Mr. Cowles has so fully and ably set forth the merits and advantages of aluminum, bronze as a gun metal that I merely wish to state that I coincide in the views he has expressed, and to add my experience and observation of the workings of the aluminum alloys.

Two years ago my investigations into a suitable metal for a torpedo flask led me to inquire into their merits. At that time small quantities of metal were produced in an experimental furnace, and some of the tin-copper-aluminum alloys promised excellent results, the tests showing great strength and ductility. I selected a grade of silicon bronze that in small castings had developed a tensile strength of 74,000 pounds and an elongation of 18 per cent. A flask was cast at the Washington Navy-yard, and a test bar from it showed a tensile strength of but 35,000 pounds, with scarcely any elongation. Upon examining the fracture there were decided evidences of ligation, and upon further investigation I became convinced that this would occur in all large castings of tin bronze, unless chill molds were used to effect rapid cooling.

A representative of the Cowles Company came to Washington to inquire into this unsatisfactory result. He stated that later experiments at Cleveland tended to confirm that made at the Navy-yard. Being satisfied that silicon bronze would not answer my purpose, we cast some test pieces of Al aluminum bronze, which developed the following properties:

Dimensions.		Weight applied.	Weight per sq. in. on orig. section.	Elastic limit.	Elonga- tion, per. ct.	Red. of area, per. ct.
Length.	Diam.					
2.0'	.500	22,485	114,514		0.45	0.00
2.0'	.501	21,650	100,823	79,894	0.05	2.39

These results were so remarkable that I expressed at the time my belief that the metal would make an excellent gun, if it retained its strength in large castings and under a moderate heat. Further inquiry into the properties of the metal showed that it might not stand the high heat that was an accompaniment of the power I purposed using at that time, and for the time I abandoned its use.

Not being able to obtain a steel flask, after having spent much time and some money in the attempt, I was obliged to change my plans and avoid the great heat required by the former design. During this time I had experimented upon castings of steel, phosphor bronze, and the aluminum alloys, and finding the latter superior in strength as well as ductility, and also far more free from flaws and blow holes, I decided upon the use of aluminum brass, having a strength of 87,000 pounds per square inch. Mr. Cowles and I made various experimental tests, some of which he has narrated. I satisfied myself that even in green sand castings there was no ligation with aluminum bronze or aluminum brass; that they retained their strength in large castings; that aluminum bronze, remelted without the further addition of copper or aluminum, developed the same properties in the second castings, while under the same conditions aluminum brass deteriorated slightly in strength, unless a small percentage of zinc were added. Contrary to expectations, aluminum bronze (Al grade) was found to be practically as strong when heated to 400° as when at normal temperature. At their works I saw a number of aluminum bronze cylinders 6 feet long and 15 inches in diameter and 2 inches thick, some of which were turned down to 1½ inch in thickness during my stay, and in no case did I see a single flaw after the surface scale was cut under. Of the 33 castings made for me, all were good save one, and that gave evidence of having been poured in a damp mold.

It has been the belief in some quarters that the exceptional strength of these alloys was due to the small castings that were taken from the earlier use of the metal, and that failure would follow in the attempt to make large castings. My observation leads me to the belief that large castings can be made that will prove fully as satisfactory as those made from any metal, and surpass them all in either strength or ductility.

In the late under the tool, Al bronze and the higher grades of aluminum brass show properties similar to wrought machinery steel, while the lower grades resemble wrought iron, the turnings coming off in long tight curls. The file makes but little impression on the tighter grades of these metals. From this fact it would appear that the fears of abrasion in the bore of a gun when made of other metals than steel, so often expressed by advocates of the built-up gun, are not well founded when applied to these alloys.

In the aluminum alloys, possessing enormous strength and great ductility, ranging in the bronzes from 114,000 pounds tensile strength and 5 per cent. elongation, to 90,000 pounds and 10 per cent., and to 72,000 pounds and 47 per cent., and in the Hercules metal, varying from 80,000 to 100,000 tensile strength and 20 to 30 per cent. elongation, there can be found gun metals whose physical properties would suit the most conservative gunmaster, and whose qualities would satisfy the most arduous conditions of service. With interior cooling and heated molds the initial stress can be regulated, and every condition required for perfect cast guns can be readily fulfilled. Such a gun would give us a distinctive and superior type of ordnance.

In view of the remarkable properties possessed by these metals and the advantages of construction, it would be well to cast two service guns of aluminum alloys and of the types proposed, and to test them thoroughly in competition with built-up guns of the same weight and calibre.

It is to be hoped that the use of these metals for gun construction will be thoroughly prosecuted by our Government, that in future years we may not be called upon to adopt them, as we have done with the Easton breech block and the Hotchkiss gun, products of American ingenuity developed by more progressive governments abroad.

#### LIEUT. ALBERT GLEAVES AND MR. VERY.

Lieut. Hall was followed by Mr. Edward W. Very, of the Hotchkiss Ordnance Co., formerly Lieutenant, U. S. Navy, who stated that he could offer no positive opinions as to the comparative adaptability of aluminum bronze to gun construction, and occupied his time with a very interesting statement of the argument against cast guns. Concluding, Mr. Very said: "I wish Mr. Cowles all success and there is nothing irrational in his proposed development." Following Mr. Very, Lieut. Albert Gleaves, on duty at the Naval Ordnance Proving Ground, Annapolis, said:

The lecturer suggests two methods for the fabrication of aluminum bronze guns, namely, first, upon Rodman principles, and second, upon those of Uchatius. In regard to the first, an Italian writer in 1882 said, in speaking of the splendid results obtained by the Rodman guns (cast on Rodman's plan and hooped with steel), "In heavier guns we cannot be certain of obtaining homogeneity throughout thickness of the metal, and we can hope with this system not to fall behind? Will it not be more prudent to depend entirely the use of iron, and seek in steel a strength that iron cannot give, and which the present condition of artillery demands?"

Again, the Austrian artillery, which is quoted as having used exclusively since 1873 the Uchatius method, is composed, according to Brassey (January, 1886), of ten types of Krupp guns, of which the largest is a 12-inch gun, the calibre of the latter being 8", 8", 8", and 8". It has been stated in England that attempts to fabricate on this principle the large tubes required for heavy natures have been unsuccessful; moreover, the method was abandoned in Austria in 1881 on the death of Gen. Uchatius, and the Krupp steel gun adopted.

The difficulties in casting guns increase rapidly with the

calibre, and as yet have not been overcome. The only proof that it is possible to cast a successful high-power gun is the actual accomplishment of the fact—all else is theory.

Neither the powder pressures alone nor the tensile strength of the metal in guns is a criterion of their efficiency. As Major Mackinlay remarks, in his excellent Text-book on Gunnery, the best measure of the efficiency of a gun is the amount of work producible with safety per ton weight of gun, and on this basis, with the data compiled by the lecturer, let us compare the much abused steel gun with the cast iron gun.

#### STEEL GUNS.

Cal. inches.	W.V. tons.	Projectile. pounds.	L.V. feet.	Work per ton.
(a) 15.75	71	1711	1708	484.4
13.97	51	1155	1043	423.5
12.75	36	684	1517	294.7
(b) 15.75	71	1708	1696	498.

#### CAST IRON GUNS.

Cal. inches.	W.V. tons.	Projectile. pounds.	L.V. feet.	Work per ton.
(a') 18.	87	2900	1378	393.5
12.6	38	770	1498	313.2
12.25	40	700	1455	268.
17.75	100	2500	1212	349.8
12.3	54.3	1352	1352	353.3

From this we see that the steel gun (a) of 71 tons, weighing 18 tons less than the cast iron gun (a'), does 151 tons per weight of gun more, which represents an increase of 45 per cent. in efficiency, and the steel gun (b) is in like manner 41 per cent. more efficient than the 100-ton cast iron gun which weighs 29 tons more. In other words, with a strength of metal three times as great we have increase in efficiency of 41 per cent. to 45 per cent., instead of 25 per cent., when the guns are improperly compared as to their tensile strength and powder pressures alone. Even if these cast iron guns did the same amount of work as the steel guns with which they are compared, the great difference in weight would be a most important factor in favor of the steel guns for naval artillery. Moreover, in speaking of the pressures in cast iron guns, the lecturer does not follow out his own distinction between cast iron guns (bored or banded), and homogeneous guns. As a matter of fact, the pressure in homogeneous cast iron guns varies from about 8 tons in the IX-inch S. B. to 11.5 in the XV-inch.

Let us now consider the relative endurance of cast and built-up guns. The life of our old cast iron guns is estimated to be 1,000 rounds, but cast guns have been fired as many as 3,000 rounds. The endurance of steel guns is perhaps not so great, but, as has been shown, steel guns do much more work and are therefore better. Col. Hatfield mentions a 6-inch gun that was fired 1,800 times, and an 8-inch 12-ton gun that was fired 67 times "between breakfast and lunch." An 11-inch R. L. which was found to be unserviceable from erosion after firing 95 rounds, was lined, and up to February, 1887, had fired 239 rounds and still remained serviceable. In 1886 trials were made at Galtre to determine the life of steel guns, with the following results, which are taken from the recent N. I. office publications:

"2.55 steel B. L. R. This gun was fired in all 2,081 times, and although the erosions were so great that the lands were almost entirely gone, the resistance or strength of the piece was adjudged to be as good as when new.

"3.54 steel B. L. R. Fired 900 times.

"3.9 steel B. L. R. Fired 1,285 times; owing to great erosion at 1,100 rounds the piece was set at 1,000.

"5 steel B. L. R. Fired 424 times and the life of the gun placed at 400.

"6.3 steel B. L. R. Fired 506 times, 539 rounds being with service charges. It was not until after the 338th round that any change could be observed in the bore.

"Guns of this character can only be regarded as unfit for service in war, after they have been used in accuracy, or when they are so much weakened that a rupture of the piece may occur." It is to be noted "that the power to resist rupture was never impaired beyond a point of safety, and that relining the bore would have made the guns almost equal to new ones."

The guarantee of the Krupp gun to be only 75 rounds, standing alone as it does in the lecture, is apt to be misleading. It means that the gun is guaranteed to stand 75 rounds before it becomes necessary to reline the tube.

That aluminum bronze is estimated to cost 16 cents per pound less than steel is not a particularly weighty argument in its favor, for that gun is the cheapest always which is the best, regardless of its intrinsic value.

No doubt it would add much to the appearance of a man-of-war to be armed with guns that do not corrupt and that have the lustre of gold, but so would purple sails and silver masts. However, the great question is one of efficiency; and if guns cast of aluminum bronze are better than steel guns, by all means let us have them, but as at present these guns exist only on paper, it is simply a question of theory against practice. If the lecturer will produce a gun cast of aluminum bronze which will stand the prescribed test and give better results than built-up steel guns, then ordnance officers will be as eager to defend it as they now are to uphold the steel guns which have so far surpassed all others.

#### ENSIGN J. H. GLENNON, OF THE NAVAL ACADEMY.

Ensign J. H. Glennon, Instructor in Ordnance and Gunnery, U. S. Naval Academy, said:

Looking over this paper in some detail, we come first to the physical properties that a metal should possess in order to make a good gun metal. The lecturer states first that the metal around the bore should have as high an elastic limit as is attainable. This, of course, is true so long as we use a metal that is safe in other particulars. It is the reason for using medium steel in preference to low steel, wrought or cast iron, or aluminum bronze, if we consider what is really already attained with that metal as shown by the paper before the Institute. Secondly, he says the distance the metal should stretch within the elastic limit should be as great as possible. The reason for this is not evident, nor does the illustration given by the lecturer really prove anything. There is a limit to the allowable stretch. A metal that would extend like India-rubber, for example, would not do at all. Nearly all the work of the powder would be wasted in stretching the gun; and in two guns the elastic extension of one being twice that of the other for the same pressure, there would be just twice the work, useless work, expended on the first that there would be on the second. This work would, of course, lessen that done on the projectile. In any gun, however, this quantity would be small; there would not be enough extension to lessen the pressure materially, and we would find that the maximum pressures two guns could stand, supposing their elastic strengths equal, would be precisely the same, and entirely independent of the elastic extension.

The lecturer says, thirdly, the metal of the gun should be as ductile as possible. There is no one thing more written about in discussions on guns than ductility. The lecturer believes in making a gun spring. Of what use is ductility in casting a gun? No ductility in a gun metal would be undesirable; but excessive ductility is not needed. If a higher elastic limit can be attained by stretching a metal somewhat, provided that we do not materially weaken it to resist compression, ductility can be brought into play. We would permanently stretch the metal, and get rid thereby of some of the ductility. But after a gun is down to its final dimensions, as a gun is, it is no longer a gun metal; its elastic strength will bring its ductility into play at all. If the gun, as it will, if properly constructed, will extend during firing and afterwards return to its original dimensions, the bore which is cylindrical at first will remain so. If not, parts unequally strained will have different sizes and shapes. A gun is unequally strained in its different parts. The bore, after firing, if ductility is brought into play, will therefore necessarily be irregular. This is the case with the irregular strains in future firings, and therefore other irregularities, which must be removed in some way or else the gun will burst; if removed, we will have a weaker gun than we had originally, and can go ahead and repeat the process until we are sure we have no reserve ductility to count upon, when it would be a wise precaution to stop firing altogether. A gun may be so built, as is the Navy 6-inch M. L. R., that it is

really not finished until after some of the ductility of the inner tube is brought into play; in the particular case cited it is necessary, in order to set the tube firmly in its cast iron casing. Of what further use is the great reserve ductility of the wrought iron, which cannot be brought into play at all except by bursting the outer cast iron body? A little further on, the lecturer speaks of the value of cast iron as a cannon metal. Whatever other properties it may have, it certainly does not possess much ductility. On the other hand, wrought iron does possess great ductility. In guns, however, it has been fully tried; and found wanting, if we can judge anything from the action of Great Britain in this regard.

With respect to the fourth point, hardness, steel with a high elastic limit is hard, and naturally, with steel guns, we hear little talk about this particular property.

To realize the principle of initial tension, *exactly* is the mechanical impossibility. That it is realized *satisfactorily* is proved by the fact that all gunmakers, private firms whose pockets are affected by failures in their guns, adhere to it. It is impossible to realize the full tensile strength of the metal in the form of pressure without permanently deforming the gun, where we use any metal of which the tensile is close to the elastic limit, no matter how the gun is put together, unless the elastic limit for compression is very much greater than that for extension. The lecturer says nothing about the elastic limit for compression of aluminum bronze in its original form, not to speak of what it is after mandreling. (By mandreling the gun he is bound to stretch the metal more than he compresses it, unless the outside is held in some way.)

The 1,300-inch tension mentioned by the lecturer is tension per inch. In a ring 17 inches in diameter this would be .027-inch extension for the circumference, and would be very quickly noticed.

In steel built-up guns the shrinkages can be calculated for the minimum value allowed of the elastic strength of metal. The modulus of elasticity for different steels being practically constant, the gun will certainly be as strong as it is calculated to be.

It would certainly be hard to say what would be the effect of vibration in a built-up gun, or in any gun, when we remember that the blow is not delivered at a point, but along the whole bore successively. Nor does the fact of vibration seem to have much bearing on built-up guns and gun-bursting, as all the recent guns that have failed have done so at points where the guns were not built up.

The lecturer apparently thinks that cast iron guns with steel or wrought iron tubes are not built up. They are, however, just as pure examples of the built-up gun as if both parts were steel and one shrunk on the other; the difference is in the way of the building. In the one, the outer tube jacket or hoop is shrunk on; in the other, the inner tube is forced out.

A comparison in the efficiency of guns can easily be instituted from the guns at present in the Naval Service. Take the two 8-inch guns, the one all steel, the other cast iron body with wrought iron tube. The first has a muzzle velocity of 2,000 feet, the latter 1,450 (however, not realized in practice); the projectile of the former weighs 260 pounds, of the latter 180 pounds; penetration of the former in wrought iron at least twice that of the latter; the extreme range at least double; the accuracy in firing in a still greater ratio, and the muzzle energies 25 to 10.

General Uchatius was modest, and started with a tube of 43,000 pounds tensile strength, 6,000 pounds elastic strength, and by mandreling raised the elastic strength of metal next the bore to 15,000 pounds, or about one-third the original tensile strength of the metal. The lecturer, by mandreling, proposes to raise the elastic strength of the metal next the bore to the full original tensile strength of aluminum bronze. This is mere speculation. Nobody would accept it without experimental proof. Mandreling, by the way, is practiced on steel tubes for guns. Why not start with steel of 60,000 pounds elastic strength at once, and raise it by a similar process (on paper) to 120,000 pounds? Or, to take a metal with very similar properties, why not use mild steel of 70,000 pounds tensile strength, 30,000 pounds elastic strength, with a percentage of ductility of 30 per cent., and raise its elastic limit? The elastic strength of the steel is the greater, and the other qualities are the same in the two metals. What is there in the process that would apply to the aluminum bronze and not to the steel?

One point more: bronze in guns has always been more or less affected by the heat of firing. The metals of the alloy are affected differently, leaving the strength of the metal of the gun that due to the copper. The lecturer does not say much on this point. At each fire, the bore has to stand a temperature somewhere between 3,000 deg. and 4,000 deg. F. After a few rounds fired quickly, the outside would be too hot for the hand. The only experiment quoted in respect to the effect of heat on aluminum bronze is one in which the alloy, after standing over 100,000 pounds stress when cool, broke when heated to 300° F., having stood over 100,000 pounds when heated once before. Might not the developed weakness have been due to reheating or over-heating though the temperature was only 400 deg. F.?

In conclusion, if a steel gun shows wear and tear in practice, we have always the option of falling back on the low charges, pressures, and velocities of cast or wrought iron or bronze guns. The original cost of the gun being but a small fraction of the cost of the ship, and this in turn nothing in comparison with loss of prestige, or damage that might be incurred except for the ship, why should we not have the very best guns, granting that they do cost more?

We have very good guns now, as good for like calibres as any other nation. We want even better, and there are excellent chances for them in the very line now being pursued—guns made of steel, and of higher steel, even, than is now being used.

MR. BIRDSALL HOLLY, PROF. MABERY, DR. GATLING, AND J. R. HASKELL.

Mr. Birdsall Holly, Hydraulic and Steam Engineer, Lockport, N. Y., said:

In a gun, the one physical property, above all others, that the metal of its walls must possess is a high elastic limit. Truly, as Mr. Cowles says, this determines the pressure a gun will stand without distortion. Cast iron, wrought iron, steel, and aluminum bronze, have not the same elastic property; hence it would seem that the competition of the future must be between finer qualities of steel on the one hand, and some new and strong alloy on the other. The aluminum bronzes, having such high elastic limits, in addition to their other valuable qualities, appear to offer metals that will overcome the objections that have been raised against steel.

The object to be achieved is great. In order to find the best metal for guns, at the present time, it is worth while for our Government to exert every effort. There are many unknown alloys of aluminum that should be investigated. Through my residence being in Lockport I am familiar with some of the capabilities of the electric furnace and the wonderful properties of the aluminum alloys. The bronzes cast near the cast iron. This is the case with the steel, and is easily overcome in casting. The absence of blow holes and the lower melting temperatures give to these alloys a great advantage over steel. The method of making alloys is such that stimulation such as Government patronage would give would greatly lessen their present reduced cost and enable them to enter into very general use. Were I to make a gun I would adopt the Parrott gun as a model, and make it with wire reinforcement using such alloys of aluminum as would enable me to apply the principle of *spring elasticity*. The reinforcement should be driven or screwed on by hydraulic pressure. The parts could in this case be cast with uniform dimensions. The Rodman method of casting would be used, keeping the outside of the mold heated.

The range of properties attainable in aluminum bronze is in its favor. What is in the furnace I have seen it "doctored" and tested and almost any desired property obtained. It is uniform in its composition, and does not separate into a number of different alloys as does the tin bronze. We know that bronze guns are used and that they do not burst. I have long been of the opinion that if we could double the strength and elasticity of bronze, we would have a metal superior to steel for guns.



Professor Chas. F. Mabery, Case School of Applied Science, Cleveland, Ohio, said:

It may be of interest to call attention to the peculiar property aluminum bronze has of resisting the action of ordinary corrosive agents. The durability of a gun evidently depends to a certain extent upon the capability of the metal of which it is constructed to withstand the corrosive action of the products of explosion; and of two metals with equal qualifications in other respects, the one that possessed this property in a high degree would have a decided advantage over the other. It is well known that no common alloy can compare in this respect with aluminum bronze. The peculiar nature of this alloy, which approaches that of a chemical compound, serves to protect the copper from oxidation, and the resistance of aluminum to the action of sulphur seems also to diminish the readiness of copper to unite with this element. Carbonic dioxide and nitrogen, the chief products of the explosion of gunpowder, would not affect aluminum bronze, and the same would doubtless hold true concerning the gases formed in smaller quantities—carbonic oxide, hydrogen, hydric sulphide, sulphur, and oxygen. Neither would the principal solid products of an explosion—potassic sulphate and potassic carbonate—corrode the metal; and the sulphur compounds—potassic sulphide, potassic hyposulphite, potassic sulphocyanate, etc.—would probably have little effect upon it.

Another distinctive characteristic of aluminum bronze is its freedom from ligation. The aluminum does not melt before the copper, and, except a very slight loss from oxidation, no change in the proportions of the alloy is observed after a series of meltings. In this respect the metal is superior to the tin bronzes, in which, as is well known, the tin is liable to melt away from the copper, thereby changing very materially the nature of the bronze. Aluminum bronze would doubtless be free from this defect, since no change in the proportions of its constituents would result by ligation at any temperatures below the melting point of the alloy.

It has been suggested that the superior strength of aluminum bronze manufactured in the electrical furnace over products obtained by melting together copper and aluminum, may be due to a more complete incorporation of the constituent metals during the process of reduction. Whether this is true, or whether, as seems more probable, the greater strength depends upon the small percentage of silicon usually present, has not been fully determined by experiment.

Dr. R. J. Gatling, the inventor of the Gatling gun, Hartford, Conn., said:

I have read with deep interest the advance copy of the paper, "Aluminum Bronze for Heavy Guns," by Mr. Alfred H. Cowles. I will not attempt any criticisms of the author's views upon this important subject. I quite agree with him in all he has said in his valuable paper. I believe the coming large cannon will be a gun cast of either steel or aluminum bronze. I do not believe in "built-up" guns, for reasons given hereafter; such guns are more expensive to make, and are, in my judgment, not so safe, and are less durable than guns cast of steel or bronze. Built-up guns may be able to withstand the internal pressure that they may be subjected to, but the great objection to such guns is not only their cost, but their inability to bear the continuous shocks and strains produced by the force of the gases, and the vibrations and wave motions engendered at each discharge.

There are two kinds of vibration or wave motions produced at each discharge: one is produced by the force of the powder gases, and the other is caused by the recoil—the latter is quite as deleterious as the powder strains. In a built-up gun there are many joints in its exterior surface, and the vibrations and wave motions produced at each discharge are checked at the joints, and ultimately produce crystallization and weakness of the metal at such joints. These are facts which explain the short life of built-up guns. The great durability of the Rodman guns is not solely due to the way they are cast, but to their uniform and smooth exterior surface. Guns should not only be made of strong, tough, and springy metal, but should be, on the outer surface, free from joints or sharp angles. I will say in this connection, the lighter the gun the sharper will be the recoil and the greater will be the vibration or wave motions produced at each discharge; it is therefore better to have the guns of good weight (especially guns for fort use), so that the weight of metal may assist in taking up the recoil—one pound in the gun will do more to check and take up the recoil than two pounds in the carriage wheels. Steel can now be produced cheaply and in large quantities; that heavy guns can be cast of that metal, or of aluminum bronze, on the Rodman plan that will be the largest, cheapest and best guns ever made. Such guns can be made, if necessary, of 100 tons weight, to use a charge of, say 600 or 700 pounds of powder, and discharge a ball of a ton in weight, and have a range of 10 or 12 miles. It is needless to say that such guns are greatly needed for the national defenses.

Mr. J. R. Haskell, inventor of the multicharge gun, said:

I have examined closely into the subject of the best metal for the construction of heavy guns, and I place them in the order of excellence as follows: 1st, aluminum bronze; 2d, cast iron; 3d, steel.

In the paper of Mr. Cowles, now before me, he has stated the advantages of aluminum bronze as a metal for constructing heavy guns, in which statement I fully concur. He has given a table showing the physical qualities of the metal, which shows it to be fully equal to steel, if not superior; and at the same time he demonstrates that it possesses other qualities which steel does not, which makes it superior to steel as a metal for constructing guns.

In making guns of ordinary gun bronze, they must be made of new metal and good bronze cannot be made of old guns, as the tin burns out in remelting, and the exact proportions cannot be arrived at. A certain proportion of zinc has to be used as a flux to aid in uniting the copper and tin. I am aware that the Ordnance Manual of the Army gives nine parts of copper and one part of tin as the composition used, but all the bronze founders I have employed say that a little zinc must be used as a flux. Now, in making aluminum bronze no flux is needed, as aluminum thoroughly unites with the copper, and with all other metals. It increases their fluidity, and much finer castings can be made with any metal when alloyed with aluminum. Wrought iron when alloyed with aluminum can be melted and cast in molds, and as an evidence of its perfection for purposes of casting, currier combs having very fine teeth can be perfectly cast from it while still possessing the qualities of wrought iron. The aluminum, when once alloyed with copper, does not burn out in remelting as tin does, and therefore old guns can be remelted and used over again in constructing new guns, the metal being fully equal to new metal.

Aluminum bronze is a much better conductor of heat than steel or cast iron. This is a great advantage, for the reason that the guns, after they are cast, will cool more evenly than either steel or iron, and therefore there will be less tensions created by unequal contraction in the cooling of the guns, neither will there be so much danger from unequal expansion when guns are fired with great rapidity. This is an advantage to which Mr. Cowles does not allude. These tensions are such, in some instances, that large guns have burst in the lathe after work had been commenced in turning them off.

In making large masses of steel for guns it is impossible to have it entirely homogeneous. There will be places in it where it is harder than others, and this inequality is detrimental to the gun. In aluminum bronze there is a perfect union between the two metals. It is not a mere mixture, but there is a chemical union, and the bronze is perfectly homogeneous. In this respect it is very much superior to steel for gun making.

I am so thoroughly satisfied of the superiority of aluminum bronze over any other metal for the construction of guns, that I have determined to make an 8-inch multicharge gun out of this metal, as made by the Cowles Electric Smelting and Aluminum Company.

#### REMARKS OF THE CHAIRMAN.

The Chairman said: "The gentlemen who within the last year have appeared before this and other audiences to propose substitutes for the material now used, have based their recommendations, first of all, upon the assumption that a new material is urgently necessary, that now in use having shown itself hopelessly unreliable. This assumption they do not attempt to establish by the citation of evidence, but content themselves with such statements as the following from the paper of this evening. 'I need not refer to the many failures of steel guns,' etc. As the lecturer is dealing with guns of the present day, and not with those of 20 years ago, it is fair to assume that when he says 'steel guns' he means such steel guns as are now in use; that is to say, steel built-up guns."

"I have no doubt the sentence quoted was written in perfectly good faith, and that the lecturer believes that a large number of built-up steel guns have burst. This is a belief very commonly held, even among people whose sources of information ought to be reliable. It seems to rest to a great extent upon a widespread but entirely erroneous idea that the artillery of England is principally of steel, and that the frequent accidents reported from English ships and forts have been in steel guns. The fact is, that the number of steel guns in service in the English Army and Navy is quite insignificant in comparison with the number of wrought iron guns."

"About the beginning of the present year a return was made to Parliament of the number of English guns that had failed in the 12 years preceding. The list includes 31 guns, designated by their numbers and marks. A comparison of the list with a descriptive table of ordnance issued by the War Office, shows that of these 31 guns only two were of steel; the 6-inch gun of the *Active* and the 12-inch gun of the *Collingwood*. To these should be added a 9.2 inch gun which failed in trial."

"Reports have been frequent of the bursting of Krupp guns, but, so far as I can learn, only one such report is capable of confirmation. This is the case of a 10-inch Krupp gun which burst at Fort Heppe in 1884. It will be understood that I still speak of built-up guns, the manufacture of which by Krupp dates from 1872."

"To the four examples cited above of all-steel built-up guns which have failed in service or test, must be added a DeBange gun of 42 centimetres calibre, the muzzle of which was blown off in France in 1885."

"The large number of built-up steel guns which are authoritatively recorded as having burst reduces itself, then, to five. With regard to these, it is interesting to note that without exception they failed only in the chase, forward of the hooping; that is to say, at the point where it had been attempted to give the necessary strength by a single ingot unassisted by the building-up principle. In every case the fracture of the tube was stopped short at the first hoop. In fact, the DeBange gun mentioned was reported as entirely serviceable after the accident, and other guns have actually been built upon the model presented by this gun after the loss of its 19 inches of unhooped muzzle."

"Such a thing as the failure of the built-up portion of a steel gun is, I believe, absolutely unknown; and all authorities who have discussed the accidents quoted above have been forced to the conclusion that the guns would not have failed if the hooping had been continued to the muzzle, as it is in the latest designs."

"With regard to the lecturer's statements that to realize satisfactorily the conditions involved in the principle of initial tensions 'is generally conceded to be a mechanical impossibility,' and that 'practical men consider the nicety of workmanship required for this as impossible of attainment,' it need only be remarked that Sir Joseph Whitworth, Sir William Armstrong, and Herr Krupp have been generally conceded to be practical men, and they have all believed that the construction of such guns was not only possible but very simple."

"The lecturer says that cast iron guns have been known to stand pressures far above the tensile strength of the metal without apparent rupture, but it is doubtful whether or not a steel gun has ever stood such a pressure. As the tensile strength of the steel in question is about 48 tons, the lecturer would probably have been safe in saying that no steel gun has ever stood such a pressure, and he might have added that no steel gun will ever be called upon to stand it. And this would seem to be a point in favor of the steel."

On the motion of Commander Harrington, seconded by Commander Sampson, the thanks of the meeting were unanimously tendered to Mr. Cowles for his interesting paper.

#### MR. COWLES'S REPLY TO CRITICISMS.

The following paper, in reply to some of the foregoing criticisms, was received Nov. 13, 1887, and appears in the Journal of the Proceedings with the others here quoted:

Mr. Eugene H. Cowles.—A careful review of the criticisms that have been made against the proposition to substitute aluminum bronze for steel in the manufacture of heavy guns, shows that our position on certain points is not quite clearly understood by some of the distinguished gentlemen who have honored the discussion with their opinions.

The most important misconception that has arisen appears to be that we have the idea that the old system of cast or wrought-iron ordnance might better have been perfected and adopted than the present system of high power, all steel, built-up guns. Nothing could be further from the position we hold, or from that advanced in my brother's paper. If we had not held the opinion that the present system of heavy guns is the best that the world has thus far seen, the able remarks of Lieutenants Knight and Glenave would certainly have convinced us of that fact.

The many references to cast iron guns were made only to emphasize the fact, that notwithstanding the comparatively poor material of the old solid cast iron guns, the gain in work done by the new 'built-up' steel guns was not proportionate to the higher physical qualities possessed by steel over the

cast iron. In other words, a gun of steel of 80,000 pounds tensile strength and of proportionately high limit of elasticity gives us only about 45 per cent. more efficiency than a gun of cast iron of 30,000 pounds tensile strength and a low limit of elasticity, although the steel has fully 200 per cent. greater tensile strength and a much higher limit of elasticity than the iron; and this, too, regardless of the fact that the most perfect and costly workmanship of the world has for the past generation been vainly employed to apply the principle of 'initial tension' to the fabrication of 'built-up' guns. That solid guns of iron, steel, or tin bronze, either wrought, cast, or forged, should not have been able to keep pace with the rapid advances made in 'built-up' guns is perfectly natural. Indeed, when we consider the numerous, and to a somewhat large extent contradictory, physical qualities that must be possessed in combination by a proper material from which to make a solid gun, it could not have been possible that the solid gun should have succeeded in holding its own, when only iron, steel, or tin bronze were at hand from which to construct it.

"With these facts in view, and having clearly in mind the reasons why solid guns in the past have not succeeded, the proposition was made that a solid gun can now be constructed of aluminum bronze, because in this alloy is found a combination of all the good qualities of iron, of steel, and of tin bronze, with none of those elements of failure that have heretofore rendered it possible to make a successful large gun of a single piece. These qualities, physical and chemical, many of them contradictory in other metals, together with the economic advantages, are as follows: A remarkable combination of maximum tensile strength, hardness, ductility, elastic limit, stretch within the elastic limit, compression strength, tenacity, and malleability when not; of freedom from ligation, freedom from difficulties in casting, non-corrodibility, minimum weight, minimum cost, of shortness of time required for construction—a matter of great importance to Government economy—and finally, the maximum intrinsic value of the metal when the gun is rendered obsolete or injured."

The above claims many engineers may regard as extravagant, and we would be slow to put them forward, were it not that they are the deductions of nearly 2,000 carefully conducted and recorded examinations of the properties of the alloys of aluminum and other metals. Each one of these examinations has embraced from four to ten distinct physical and chemical tests of these alloys, and all the important results obtained by us we have had carefully duplicated and repeated many times by eminent experts both at home and abroad. It is scarcely necessary to add that this work has involved many thousands of dollars, not including the half million dollars invested in plants for the commercial production of these alloys."

"It is, therefore, with some experience and much confidence that we believe that, if the old cast guns failed and were not as good as the present 'built-up' guns, it was because they were made of cast iron instead of aluminum bronze; and further, that, if the Ubatius manredred guns only held their own up to 1886, and up to 6-inch size, it was because Ubatius used tin bronze or stero metal instead of aluminum bronze. While still holding the view that the best gun can be made from a single piece and that it is simply a matter of experience, time, money, brains, and a proper metal from which to fabricate it, there appear to be good reasons to believe that the substitution of aluminum bronze for steel, even in the construction of built-up guns, would be a great advance."

"The high elastic limit and tensile strength and ductility of aluminum bronze is a result of the aluminum contained in the bronze, and, in the case of forgings, of work done on the same, and not largely that of temper, as with steel. It has not those uncertainties of strength and tendencies to brittleness which so good an authority as Mr. Daniel Adamson, of the British Iron and Steel Association, in his presidential address, no longer ago than May, 1887, said were liable to be found in steel. At that time he stated that 'the greatest evils that have befallen steel guns have arisen from the material used, being composed of too strong a metal having little ductility and special weakness at low color heat, and at best, a material not calculated to resist concussive shock induced by the explosion of gunpowder.'"

"Farther, it can be remarked, as a supplement to the observations of Ensign J. H. Glennon on the matter of ductility in a gun material, that ductility is a reserve of safety that cannot be ignored, especially in a built-up gun, and the higher ductility of aluminum bronze would render it more valuable than steel in a built-up gun, always allowing that the elastic limit and hardness were as they are, proportionately higher in aluminum bronze than in steel. Right here it may be well to introduce a further quotation from President Adamson's address, where he says: 'Taking the elaborate discussion on Mr. Dorsey's paper in America, the artillerists may be said to take the view of adopting a strong steel, while the civil and mechanical engineers desire to use a lower and milder steel with much more ductility. No two opinions can exist that the fundamental principle to be observed in the selection of the material to be used for this purpose in the future must be such that no probability will arise that a gun will burst until so disorganized as to render it incapable of further use.'"

"In regard to the question that has been asked, Why would not the Dean process of mandreling apply to the making of a solid steel gun from a mild steel as well as in the case of aluminum bronze? the reply can be made that perhaps it would, although blow holes are not found in aluminum bronze as in steel castings."

"In point of fact, aluminum bronze in itself has no affinity for any kind of gas to be met with in the casting process, nor does it occlude gas in the melting, as does iron or steel. At times blow holes will occur in castings of this bronze, but they are invariably caused by the air or steam from a wet mold becoming entangled in the metal in a mechanical manner. Aluminum bronze, when cast in ingots in chill molds that are free from oil or gaseous facing matter, the metal being poured in a quiet, steady stream that does not foam, and through the bottom of a secondary or straining pot, is always solid and perfect—a conclusive evidence that the metal does not occlude gas. Steel cast in this manner with the

\*See also report in the ARMY AND NAVY JOURNAL of Dec. 17, 1887, of the failure of the DeBange 14-inch gun at Calais, August 4 last.—ED. JOURNAL.

†Member of the Royal Institution of Great Britain, and of the American Institute of Mining Engineers.



same care is always more or less spongy. The blow holes, as Dr. Gatling suggests, may be gotten rid of by the use of aluminum in the steel casting process, but only actual working experiment will determine whether or not it can be accomplished. The success that many steel foundries are making with the ferro-aluminum alloy produced at Lockport, N. Y., would tend to show that efforts in this direction would result in the soundest castings that have yet been made of steel.

"It has now been shown that, as advocates of the aluminum alloys for ordnance purposes, the position of Mr. A. H. Cowles, as well as that of the writer, is one preferably in favor of solid aluminum bronze guns, solid aluminum steel guns, or, if we have to make a virtue of necessity, we should favor the use of aluminum alloys either of copper or steel in the built-up gun. In other words, we have such strong opinions as to the value of aluminum when added to other metals, that we are aluminum men first, last, and all the time, until actual practice shall have demonstrated our theory on this subject to be erroneous.

"As to the advisability of the Government making an investigation of these alloys, it has been objected that there is no urgent need of a new material for guns. To this it is only necessary to say that the time never has been yet that man has refused to accept a better weapon of defence than the one he already possessed without in the end paying dearly to some conqueror for his short-sightedness; and it is not now likely that the world in this unexampled age of progress is going to rest content with steel if there is the smallest chance of obtaining a better material. No, we must move on and on, and the gun, or that particular material for a gun, that is regarded as perfection to-day, to-morrow may be obsolete, and in a generation may be looked upon as a relic of ignorance and inexperience.

"Since the War of the Rebellion these changes have been almost yearly; cast iron guns have given way to wrought ones, to compound cast and wrought cannon, to wrought iron and steel guns, finally to all steel. Guns of cast steel have given way to those of forged steel, forged steel to 'built-up' guns, short guns to long ones, smooth bore guns to rifles, muzzle loaders to breech loaders, large-bored guns to those of smaller calibre, and so it is likely to be to the end of time. For this very reason attention has been called to the intrinsic value of aluminum bronze. During the past twenty-five years there have probably been fifty or a hundred cannon rendered valueless by the constant changes going on, to one that has actually been destroyed in battle or sunk at sea. With wrought iron or steel the loss that has thus occurred has been ninety per cent. of labor spent in fabrication. Had these old obsolete guns been of cast aluminum bronze, fully two thirds of this loss would not have happened, and the old guns, instead of having been used for fence-posts, old scrap, etc., would have been recast into more efficient weapons than before. It is not, however, intended by this remark to convey an idea that economy should govern in selecting a material for guns rather than fitness; for that material and that process is infinitely the cheapest that is the best. The argument is advanced simply to show the happy advantage possessed in this respect by aluminum bronze coincident with its other superlatives.

"With regard to its cost, sixty cents a pound would be an approximately fair price for it in a finished cast gun. If it is true, as it has been stated, that the Hotchkiss gun, which sells for something like two or three dollars a pound, can be made for much less than forty cents, it is a most substantial reason why there should be a little competition in the United States in the direction of aluminum bronze. The statement made in the opening paper of the discussion, as to the cost of steel guns, has been criticised as being the selling price to the Government at home and abroad. This is exactly as it should be understood. The cost to the Government is the selling price of the manufacturer, no matter how low the cost of production happens to be. In some cases, where the Government manufactures its own guns, it may save the manufacturer's profit. In this country, where the work is partly private and the rest done by the Government, the estimate that was made on the cost of steel guns was certainly not too high. In proof of this take the following figures for the unfinished gun steel forging contracts made this year; they surely do not represent more than the first half of the cost of the finished gun. They are as follows: Bid of the Cambria Iron Company on 1,310 tons, \$851,518.00 — 32.5 cents per pound. Bid of the Midvale Company, 1,310 tons, 1,307,240 pounds — 52.25 cents per pound. Bid of the Bethlehem Iron Company, 1,310 tons, 602,230 — 34.43 cents per pound. These prices would average higher than the present market prices for ingot aluminum bronze, and the work of converting ingot bronze into guns should cost much less than finishing and assembling rough gun steel forgings.

"With regard to a supply of aluminum bronze, it may be of interest to the naval and military public to know that this alloy would probably be, in case of suddenly threatened war, the most available national resource from which to construct high-powered guns. For it would be entirely possible to erect at least two plants within ninety days that would have an output each of at least one hundred and eighty tons per week of aluminum alloy in ingots of the proper grade for cannon. Foundries of sufficient capacity to handle this amount of metal, if indeed there be not such already in the country, could be built in the same time. The turning, rifling, and finishing plants of the larger guns would of course take more time in their erection. As to copper, there is always four or five thousand tons in store in the United States from which to form the base of the alloy. Contrast this picture with that presented by the Gun Foundry Board when it estimated that it would take three years to build the necessary plant to fabricate heavy steel built-up guns, and two years after that to get the first 16-inch guns out.

"Before ending this somewhat protracted paper it is desired that attention be called to the remarks of Mr. Wm. Metcalf. Although we disagree with him on the advisability of discussions like this on the gun question, we cannot but thoroughly coincide with him in the hope that these debates will in no way impede the good work of the rebuilding of the Navy and the rearming of our seacoast defences by adding further confusion to a somewhat confounded subject.

"This work of reconstruction as it is now going on is eminently wise and patriotic, and it is a surprise, which I as a citizen take pride in, to witness how much is being done, and well done, at the various Navy-yards and construction plants by the Army and Navy Departments, when it is considered how little money has been appropriated in the past for this work, and how limited the experience on this side of the water has been in these matters; and any change in the established programme of defence decided on by the proper authorities should come in as additions and reinforcements to the work now under way. To that end every citizen should contribute his influence and help, be it great or small, until the nation is in a position to defend itself and enforce such respect as is due both to national as well as international law and order."

#### LIFE ON THE FRONTIER.

Minnesota, Kansas, Nebraska, Utah, from '56-'61.  
To the Editor of the Army and Navy Journal:

I did not enlist in 1854; did so in 1856. Joined the 10th Inf. in June of the same year at Fort Snelling, Minn., and immediately afterwards took post with Hdqrs. 10th Inf., Col. Ed. B. Alexander, commanding; with Co. D, Bees, Co. G, Cummings, Co. I, Jove, and Co. K, Dumovant. All have left us except Cummings, now living in Augusta, Ga.

The old soldier from '51, in your issue of Dec. 31, must be a little "off" on dates, telling of companies, rifles, etc. etc.

The honor of being engaged in the fight at Ash Hollow, half way between Fort Kearney and Fort Laramie, on the Platte River, belongs to Co. E, Capt. Heath then commanding—his 1st Lieut., now the gallant Col. Nathan A. M. Dudley, 1st U. S. Cav. The men nicknamed him "Crazy Dudley." He has since shown that he was not very crazy.

Co. I, 10th Inf., of which my comrade speaks, was then commanded by the gallant Capt. Jove, who lost his life in the late War. Capt. Jove and his company did not take part in that memorable fight; they did not leave Fort Ridgely, M. T., until July, 1857, to go to Utah.

By-the-by, the members of that company did not know afterwards how to provide themselves with rations from the commissary at Fort Bridger, near Camp Scott, during the winter of '57 to '58. And do not let me forget, they had a gallant 2d Lieutenant—I speak of the brave and now retired Maj.-Gen. S. Carroll.

The 10th Inf. was not in existence until the summer of 1855, when they were organized at Carlisle Barracks, Pa., and from there went to take part at Prairie du Chien, Fort Snelling and Fort Ripley.

Again I must contradict my old friend. The only regiment equipped with the Mississippi rifles, called Yagers, with sword bayonets, very heavy, were the 9th and 10th Inf.

Being a reader of the JOURNAL, and being acquainted with some of the facts and dates, etc., I take the privilege to correct, in justice to those to whom the credit belongs. The first appearance of the 6th Inf., or any of its members, in Utah, was in the spring of 1853, when the hardships were nearly over.

I am able to give more details about hauling wood, etc., etc., at some future time.

AN OLD SOLDIER.

#### THE SCHLEY BILLS.

MR. HARMER has introduced a series of bills to carry out the recommendations of the Chief of the Bureau of Equipment and Recruiting and otherwise to improve the naval service. They are as follows:

1st. That the President shall have authority to appoint in the Navy annually to the grade of Ensign in the line of promotion two enlisted men of the naval service who may be found qualified upon examination under the direction of the Secretary of the Navy, provided the persons so appointed be selected from those who shall have served faithfully and efficiently as apprentices until 21 years of age, and having re-enlisted for a term of three years, shall have passed with credit and distinction through the advanced course of instruction to be prescribed by the Secretary of the Navy, and shall be proficient in seamanship, navigation, and gunnery, and most distinguished in their studies and moral qualifications.

2d. That honorably discharged enlisted men may elect a home on board of any receiving ship during any portion of the three months allowed for re-enlistment and receive one ration a day.

3d. That naval officers be empowered to administer the oath of enlistment.

4th. That Sec. 2166, Rev. Stat., be amended by inserting after the words "armies," "or in the Navy or Marine Corps" (allows discharged enlisted men, aliens, to become citizens without previous declaration.)

5th and 6th. Extend to the Navy the benefits of the Army bill providing for the retirement of enlisted men and that for the deposits of savings.

7th. Gives apprentices an outfit of clothing to the value of \$45 on first enlisting.

MESSRS. DICK AND FITZGERALD, of New York, publish a little fifty-cent volume which will be found very useful to many of our readers. It is entitled "Weldon's Fancy Costumes" for fancy dress balls and tableaux-vivants, including full details as to colors, materials, arrangements and making-up of each character. It is illustrated with over fifty full-page sketches of the make-up for various characters. They are alone worth the price of the book as a gallery of likenesses of pretty women. We advise those who are making up their list of winter amusements to send to Messrs. Dick and Fitzgerald for a copy of their catalogue.

A Daughter of the Regiment.—Miss Felps—"We have awfully jolly times down at Governor's Island in the winter." Mr. Schwenfurth, of Boston; (to himself)—"Didn't know her father was well enough off to own an island. Guess I'd better plunge!"—*Tid-Bits.*

GENERAL GEORGE D. RUGGLES, U. S. A., North from San Antonio on leave, registered at the New York Hotel, New York City, on Thursday.

## THE STATE TROOPS.

### REPORT OF ADJUTANT-GENERAL PORTER.

MAJ.-GEN. JOSIAH PORTER, Adj. Gen. of the State of New York, presents a very interesting annual report to Governor Hill, dated Dec. 31. He describes the efforts made to induce Congress to amend the absurd and obsolete militia laws of the United States, and shows the net result to have been only the comparatively small increase in the amount to be distributed in kind among all the States and Territories.

The measures elaborated by the militia representatives of 22 States and Territories, assembled at the meeting of the National Guard Association, have been practically ignored, the "Slocum" bill in which they were embodied having never come to a vote in either chamber.

The aggregate force of officers and men in this State now approximates 13,000, an increase of over 500 since last year. Ten thousand four hundred and forty-four officers and enlisted men were present at the last annual inspection.

The 4th Battery was mustered out Feb. 25th, and the 24th Separate Company March 11th. Three separate companies have been organized—the 43d at Olean, the 44th at Utica, the 24th at Middletown. Signal and Telegraph Corps, composed of practical telegraph operators, have been authorized for the 1st and 2d Brigades, and an Ambulance Corps is provided for by G. O. No. 33. Of the present condition of the various organizations General Porter says:

"The condition of the several organizations, considered with reference to their composition, instruction and discipline, is, except in a few instances, satisfactory and encouraging. The observation of the officers of the Inspector General's Department is to the effect that 'they have grown to realize that they are not independent organizations, but part of the military force of the State, amenable to its laws and subordinate to its regulations and discipline.' There are still certain organizations which fall far short of the standard now reasonably required of the Guard, but on the other hand there are many notable examples of superior excellence, and there is a general disposition manifested to make the most of every opportunity to profit by military instruction, example and practice.

An organization should not be rated, either in strength or efficiency, according to its showing at the annual inspection and muster, but the work done at other times, especially in camp and at its weekly drills, should also be taken into consideration. The real standing of all the organizations, however, is pretty well understood, and spasmodic exhibitions of numbers in cases where there is a meagre and irregular attendance at company drills, and schools of instruction, seldom impose on anybody. Nevertheless, it has been thought well to send inspecting officers to ascertain and report what the companies, those of regiments as well as separate companies, are doing, and this practice will be continued during the year.

It would seem to be in the interests of the service, and to the advantage of the State, to dispense promptly with inefficient and lagging organizations, and replace them with companies at important stations where men are anxious to enter the service. It is to be remembered in this connection, that our railroad facilities are such that troops can be readily moved whenever and wherever they may be needed.

In last year's report no organization was distinguished by special mention. But this year the Seventy Regiment has so eminently distinguished itself, that it would be unfair to refrain from awarding it conspicuous and honorable mention. The Twelfth Regiment deserves mention for the great advance it is making under the present field officers. The Twenty-second gave evidence of its soldierly and progressive character, by marching from its station to the camp at Peekskill, and by practical instruction in field fortifications under Captain J. G. D. Knight of the United States Engineers. The Twenty-third made an admirable showing at the Camp of Instruction in everything except numbers, and it is to be regretted that in this respect it contrasted so unfavorably with its appearance at the annual inspection. There are other regiments, and there are many separate companies, which merit commendation, but it is unnecessary to enumerate them, the Inspector General having most plainly, fully and impartially, set forth in his report the merits and demerits of each and every organization. Attention however may well be called to the batteries, which are in better form than at any time heretofore, and certainly deserve this recognition. All our batteries may be depended on to work their guns, in case of need, skillfully and effectively.

Not the least of the benefits which have now become apparent as resulting from the reorganization effected a little more than a year ago as set forth in last year's report, were the opportunities and facilities it afforded to establish efficient examining boards for officers, and to prescribe a system of examination that should be uniform throughout the State. These boards are doing excellent service and deserve special commendation.

General Porter lays special stress on the necessity of providing armories for the troops, as the present system does not work satisfactorily. The law requires the county to provide them, but, while some of the counties have been liberal enough, others have inclined to evade their duty. In the county of New York, the 7th Regiment, which built its own armory, and the 12th, which has recently acquired a new building, are the only two of the regiments and batteries which are not huddled into contracted and uncomfortable barracks. Armories have been erected in some cases with State money, but an effort made to procure a special appropriation for N. Y. regiments was opposed by those in authority in that city. It is recommended that the State assume the whole burden of providing armories for its troops, so that this may not be left to the mercy of those who have no interest in the matter save to delay or altogether avoid it.

Provision should be made without unnecessary delay for every organization that is not already properly quartered, having due consideration to its station and condition. The best armory in the State will not of itself make a good regiment, but the best officers in the State will find it difficult, under the conditions of National Guard service, to make a



regiment in a barn. The situation of the New York City regiments and batteries particularly demand attention. Not only are they without suitable armory accommodations, but they are denied access to the parade ground laid out in Central Park for their use, on the ground that impossible injury would be done to the grass, and that shrubbery that does not exist in that vicinity would be destroyed. Some of these regiments are literally struggling to maintain the existence under the most discouraging circumstances. It is a question whether the expense incurred in maintaining them is not to a certain extent an inexcusable waste of the military funds, and whether military property is prudently allowed to remain in their so-called armories. There are among them those having histories of which they are justly proud, and which should be a source of strength to the State, but in the interests of economy it may well be suggested that if nothing is to be done to provide proper accommodations for them, the money and property could be more effectually applied in other quarters.

A list is given of the armories and arsenals erected under the authority of the acts of the Legislature named, and are now the property of the State. These are the arsenals, at Buffalo and New York, the armories at Auburn, Brooklyn, Binghamton, Elmira, Flushing, Kingston, Oneonta, Oswego, Newburgh, Rochester, Syracuse, Troy, Utica and Walton. Armories are now being erected also at Albany, Hoosic Falls, Mount Vernon, and Saratoga Springs.

Though he regards the Remington arm as obsolete, Gen. Porter finds it still impossible to make any recommendation looking to the adoption of a new arm. He proposes to follow the lead of the Ordnance Department of the Army "and patiently await the coming of the gun of the future, so that the State may have rifles of the same calibre as those used by the Army, and if possible of the same pattern." The guns of the Gatling batteries are in good condition, but the 3-inch rifles and light 12-pounders have outlived their time, and it is recommended that an earnest effort be made to procure a reasonable number of the new 3.02-inch B. L. rifles. The infantry's new equipments are believed to be entirely satisfactory, with the exception of the knapsacks. A special appropriation is asked for to provide haversacks, canteens and blankets. It is hoped that the issue of new overcoats may at least begin in the course of the coming summer. A report is given of the attendance at the State camp which is summarized as follows:

## Organizations.

Organizations.	Average attendance of officers and enlisted men.	Average attendance of officers and enlisted men.	Number who received pay.
7th Regiment.....	730	71.42	774
13th ".....	534	50.40	565
17th Separate Company.....	35	33.33	36
55th ".....	67	73.03	67
9th Regiment.....	388	66.42	398
6th Separate Company.....	81	77.88	83
11th ".....	38	67.85	43
38th ".....	51	74.92	53
41st ".....	56	76.40	56
47th Regiment.....	320	73.45	336
4th Battery.....	56.5	84.85	57
5th Separate Company.....	65.3	93.25	69
19th ".....	82.3	82.30	84
20th ".....	57	67.85	58
23d Regiment.....	394	59.93	417
71st ".....	406	66.46	416
10th Battalion.....	192	75.28	196
2d Regiment.....	457	83.10	500
2d Battery.....	74.7	74.90	82
1st Battery, attachments, equivocal to.....			101
			4,405

The average attendance as a whole was 74.27 per cent., not as much as heretofore, but still satisfactory. The aggregate in camp is estimated at 4,700 officers, musicians, and enlisted men.

Reviewing the encampment since 1882, every one shows improvement over the preceding one, especially in the matters of military conduct, military courtesy, discipline and police. In these particulars, such is the progress made that with the exception of a very limited number of organizations, there is little left to criticize. Drill is improving, but there is much theoretical and practical instruction needed yet. Guard duty has improved, but there is room for further improvement, and there is evidently a lack of that careful theoretical instruction which is absolutely essential in this matter. The idea that the State puts troops in camp, for the purpose of giving them a holiday after a winter's work in the armories, has almost disappeared, and no one more than the troops themselves are entitled to be congratulated that it is so.

And as it has become apparent that there is a further demand for officers to make frequent inspections and observe the work of the various organizations at their armories the suggestion that a staff of thoroughly trained officers be placed permanently on duty, and allowed suitable compensation, is renewed. So far as may be hereafter, having reference to their drill-room facilities, organizations will not be ordered to the camp that have not made reasonable progress in their armories.

The troops detailed for escort duty to the Army of the Potomac and to attend the Philadelphia Centennial, by their military bearing and soldierly conduct, reflected the highest credit on the State. The experience gained on such tours cannot fail to be of great value to the troops. It would be in the interests of all concerned, if every summer a brigade should be ordered away for a day or two, when a short march might possibly be combined with transportation by rail. To successfully conduct an ordinary march, or a "march by rail," is a more difficult matter than it seems, and the knowledge necessary to its skillful accomplishment is only thoroughly acquired by actual experience.

## Ninth New York.—Col. W. Seward, Jr.

The annual meeting of the board of officers of the 9th Regt., N. Y., was held on Tuesday evening, Jan. 3. Capt. Witthaus was re-elected treasurer for the eleventh time. Capt. W. Wolcott Marks was re-elected secretary. The following committees were

appointed: Finance, Capt. Leonard and Lieuts. Rice and McConnell; Music, Lieut. Col. Rand, Adj. Decheri and Capt. Clough; and Armory, Capt. Japha I. R. P. Gibson and Q. M. Pratt. The following were elected delegates to the National Guard Association convention, which meets at Albany the latter part of January, Col. Seward, Capt. Witthaus, Capt. Lorigan and Capt. Swift. It was voted by the officers to discard the white leggings for commissioned officers and retain them for the men. A committee, consisting of Maj. Bartlett and Capt. Swift was appointed to press the claim of \$7,000 against the State for the loss of uniforms during the railroad riots of 1877.

## NEW MILITIA LAW.

H. R. 1234.—Mr. McKenna introduced the following bill in the House of Representatives, Jan. 4, which was referred to the Committee on the Militia:

To amend the laws governing the militia of the United States. *Be it enacted, etc.,* That the militia of the United States shall consist of every able-bodied male citizen of the several States who is of the age of 18 years and under the age of 45 years.

Sec. 2. That the militia of the several States of the Union shall be divided into two classes—the organized and the reserve.

Sec. 3. That the organized militia shall consist of the organized militia of the several States of the United States, known as the National Guard or Volunteer Militia, organized and equipped under the laws of the several States.

Sec. 4. That it shall be the duty of the Secretary of War, at the request of the Governors of the respective States, to detail Regular Army officers to instruct the militia in military duties and in the use of sea-coast and garrison artillery.

Sec. 5. That at the request of the Governor of any State the Secretary of War shall furnish to the State heavy guns, siege, sea coast and mortars, for the instruction of the militia, the number not to exceed six pieces, and to be delivered at a place designated by the Governor of the State.

Sec. 6. That the War Department, upon the request of the Governor of any State, shall furnish to the militia camp and garrison equipage during State encampments or at any time when any portion of the militia is mobilized for public service, upon conditions prescribed by the Secretary of War.

Sec. 7. That a bureau shall be established in the War Department, to be called the Bureau of Militia, to be organized for the purpose of aiding and giving necessary instruction and all useful information for the purpose of increasing the efficiency of the militia of the several States.

## SHOT GUNS FOR RIOT DUTY.

CONCLUDING an article on military small arms, read before the Ohio Commandery of the Military Order L. E., and published in the "Ohio Soldier," companion Samuel B. Smith, late Captain 93d O. V. I., says:

"The objection so often made to the use of breech-loading and magazine guns, that there must necessarily be a great waste of ammunition, is scarcely deemed worthy of notice. The understanding is, that these arms are to be placed in the hands of disciplined troops, to be used under the direct supervision of officers who know when to fire and the proper amount of ammunition to be expended."

All the statements in this paper are based on the theory that the rifle is the only proper gun with which to arm troops. For an organized army, whose mission is to contend with other organized and disciplined armies, the theory is probably correct, but in the United States no army is likely to be maintained of sufficient strength, and so distributed, as to be available, as an aid to the civil authorities of the several States, in suppressing riots and insurrections. For such aid we are dependent on the militia or national guards, and for fighting at close quarters, the object being to restore order with as little bloodshed as possible, a properly constructed magazine or single breech-loading shotgun, carrying pellets of sufficient weight to seriously wound, but seldom kill, except at short range would be more effective than the rifle, whose deadly bullet may kill unoffending citizens a mile or more distant from the scene of the conflict. At a range of eighty yards or less, a shotgun would be a deadly weapon and would inflict twice the injury that could be done with a rifle; at double that distance it would be comparatively harmless.

"The already extended length of this paper prevents a further consideration of this question. The civilization of the present day, with its dense population, confined to narrow limits, renders sudden uprisings of the people, in opposition to the lawfully appointed civil authorities, not improbable, and the best method for restoring order, for enforcing the law, and protecting public and private property from the fury of a mob, is well worthy the careful and serious consideration of the law-abiding citizen, the philanthropist and the true soldier."

## Twenty-second New York.—Col. John T. Camp.

It is quite superfluous to say that the annual reception of the 22d Regiment N. Y., was a brilliant and delightful affair. The command enjoys an exceptional social popularity, and invitations to its entertainments are always highly prized. The hospitality of the 22d, too, is as generous as it is elegant, and the reception at the Metropolitan Opera House, Tuesday night, January 10, was an unequalled success in every respect.

The main hall of the Opera House was beautifully arranged, and when the dancing commenced, about 11 P. M., nearly 1,000 superbly attired ladies and gallant cavaliers were on the floor. Gilmore's band furnished martial music, and a fine orchestra inspired the dancers.

The attendance was very distinguished, including Governor Hill, Adjutant-General Porter, General Fitzgerald, and Gen. McLeer, with their staffs, and a great throng of distinguished officers, including representatives of nearly every command in the 1st and 2d Brigades, and many from other States. The invitations requested military guests to appear in uniform, and the display of plumes, gold lace and aiguillettes was dazzling, or would have been so, but for the bright eyes and bewitching coiffures of the ladies.

It was all hours of the morning when the musi-

cians sleepily put away their instruments, and the latest dancers left the Opera House, tired and happy, and already looking forward to the next invitation from the 22d.

Col. Camp publishes in orders the following extract from the official report of Col. Thos. H. McGrath, inspecting and mustering officer, relative to the regiment: "The inspection of this regiment was a grand showing. The ceremony of review and subsequent inspection and muster made evident the fact that the 22d is an organization thoroughly reliable, well disciplined, and of which the State should be proud." Maj. Duncan, regimental surgeon, is directed to immediately organize an ambulance corps in this command.

Lieut. Col. Harding and Lieuts. Maidhof, Illien, Dahl, Miller and De Bow are detailed as a Board of Examiners.

The commissioned officers will assemble for theoretical instruction Monday, Jan. 23, at 9 o'clock P. M., and on every Monday evening thereafter at the same hour until further orders.

Companies will devote one-half hour every evening during the current month to rifle practice.

The annual meeting of Co. B was held on Jan. 9 at the armory. The following committees were appointed to serve for the ensuing year:

Recruiting Committee—Sergt. Schoonmaker, Corporal Hanneman, Privates Brown, Bartholomew, Lawrence, Wightman, Unger, Beaver, Moore, Scoble and Wetzler.

Armory Committee—Q. M. Sergt. Bunsman, Privates Wolf, Wells and Gilbert.

Finance Committee—Lieut. Maidhof, Privates Calen and Hendricks.

Press Committee—Lieut. Bavler, Sergts. Schoonmaker, Griswold and Kieruan.

Discipline Committee—Lieut. Maidhof, Sergt. Treadwell, Corporals Murphy and Kroos, and Private Ritohle.

## Twelfth New York.—Col. J. H. Jones.

The 12th Regiment opened the season of battalion drills, Thursday evening, Jan. 5. The drill room in the new armory is very spacious, but the regiment has grown more than its quarters, and but five companies, D, F, H, I and K, were ordered out, and these were divided into six companies of twelve files each.

The command was in undress uniform, and the general appearance of the men was thoroughly neat and soldierly. Companies were formed and took their respective places in the drill room in a business like way that was highly gratifying, and showed excellent discipline.

The line was formed promptly and smoothly, the manual of arms being especially fine, as it was through the entire drill. Indeed, in this respect, the 12th is far in advance of the majority of the militia organizations in the State.

Col. Jones was in command during the most of the drill, but towards its close Lieut. Col. Dowd took charge, and between them nearly every movement possible was executed, the principal omissions being formations in line by two movements. So many movements were executed that it would be like writing the tactics to give them all here, but it may be said generally, that, with a very few trifling exceptions, the drill was faultless. It was so good that there was no room for criticism, and it was the more remarkable, as being the first battalion drill since the men were in camp, last June.

Examining the details, there was very much to praise. The step and the preservation of distance was uniformly good, as was the marching in line and in column of sub-divisions. The ployments and deployments were more than good, and so also was the firing by battalions, by wing and by rank. "To the right, close column of divisions," was superbly done at the first attempt. And from first to last every officer gave the proper command promptly, which is, of course, the secret of success in battalion drills.

There were no errors. The defects, as has been said, were few and trifling. The wheels, on the march, were not quite as good as they might have been, and the sets of fours, marching, did not preserve the unity that marks the highest discipline. In some cases, guides were a trifle slow in getting on the line, and needed some prompting. And there were too many men who carried their pieces awkwardly at "support arms."

It was hardly necessary for a word of "instruction" to be given at any time, and the audience, which included many well-posted critics, was constantly delighted.

On Friday evening, Jan. 6, Cos. A, B, C, E and G formed the battalion. On the previous night the sixth company was formed by dividing Co. D in two, but on Friday night, details were taken from the five companies which, of course, placed the sixth company so formed at a disadvantage. Lieut. Schuman, of Co. G, was in command of the additional company.

The drill was even more exhaustive than the first one, as it included forming line by two movements, from double column, and from double column of fours. All that has been said of the first battalion drill may be applied to this, though, perhaps, as a whole, it was not quite so perfect as that of Thursday night. The movements in line, however, and the firings were fine enough to satisfy the severest critic. The very few blunders, on the part of company commanders, were due to the rather unfortunate acoustic peculiarities of the drill room, which occasionally prevent an officer from understanding the command.

The next battalion drills will take place on Monday and Tuesday, Jan. 23 and 24, when a different arrangement of the companies will be made, to familiarize captains with other places in line.

A promenade concert for the benefit of the music fund of the regiment took place at the armory, Thursday evening, Jan. 12, and was a very delightful affair. As a concert it was sweet enough to send everyone home with beautiful numbers clinging to the memory, and as a change from the sterner associations of the armory and the iron regulations of military service, it was certainly enjoyed by the trim soldiers of the 12th and of other regiments who were present. No list of casualties has been furnished by the surgeon, but from general appearances it is probable that the regiment suffered severely at the hands of its fair friends, who were present in great force.



The result financially was, we are informed, very gratifying, and other concerts are to be given later.

#### DISTRICT OF COLUMBIA.

LIEUT. JOHN BIGKLOW, U. S. A., Acting Inspector General, directs that the companies of the National Guard will be inspected during the current month in accordance with the following programme. The number after each company indicates its battalion.

Date of Inspection.	Organizations.	Date of Inspection.	Organizations.
12.....D 1	A 320.....D 3	C 6	
13.....B 1	C 323.....B 2	C 4	
16.....A 1	A 224.....D 4	A 7	
17.....C 1	B 425.....D 7	D 2	
18.....A 4	D 426.....B 6	C 7	
19.....B 3	B 527.....B 7	C 2	
	30.....A 5	A 6	

#### MASSACHUSETTS.

GOVERNOR AMES, in his recent annual message to the Legislature, says: "The military force of the Commonwealth has steadily improved in efficiency, the attendance at tours of duty during the past year having been the largest ever known under its present organization. A spirit of interest animates both officers and men, and they are rendering good service. Appropriations already made will thoroughly equip the active force with clothing during the year ensuing, and further appropriations for uniforms will not be needed for at least five years. The matter of armories is an important one, and it should receive the attention of the Legislature, after a hearing by committee of those interested, upon a plan submitted. The military representation at the Constitutional Centennial Celebration at Philadelphia reflected great credit on our citizen soldiers."

Adj.-Gen. Dalton presents a very satisfactory report of the condition of the M. V. M., describing it as a well drilled, disciplined and effective body of citizen soldiery, which, while it serves to teach to young men obedience, manly bearing and promptness in the performance of all duties, military or civil, it also insures to the State a reliable force in time of need. While perfection is not claimed, the earnestness, intelligence and laudable pride which characterize it warrants the belief in its continued advancement. The work of the present year shows all that is claimed for the militia, and the increased

and active interest shown by citizens is an assurance of greater interest on the part of the rank and file, and of more marked success in the future. The total force of officers and men is 4,816, five vacancies yet remaining in the number of companies authorized.

Great advancement in rifle practice is apparent. The team selected from the militia by Inspector-General of Rifle Practice Col. Horace T. Rockwell, has won the first prize, and also the Hilton trophy, at Creedmore, by the highest score ever attained at this match. Ten members of the same team competed at Chicago in October last against the best teams of the Regular Army and of the States, maintaining their records as marksmen and receiving the first prize.

The annual appropriation for the militia was \$179,479, and the total expenditures \$164,599.

#### NATIONAL RIFLE ASSOCIATION.

In his address at the annual meeting of the N. R. A., Gen. Wingate said: "While at Creedmore the past year has not been marked by any occurrence which has attracted the attention of the press or the public, there have been few if any years in the history of the range in which the attendance has been greater, or more satisfactory results attained. The number of civilians who have attended the matches have been no larger than during the last two years. Long-range rifle shooting appears also to have been almost wholly abandoned by civilians and very largely so by military riflemen. But the interest in off-hand and mid-range military rifle shooting by the rank and file of the National Guard has never been greater, and the number practicing at the range and the aggregate of the marksmen who have qualified there has never been previously equalled. Rifle shooting as a mere amusement appears to be at a standstill, but rifle shooting as a part of military instruction has never been more popular or more efficiently conducted than has been the case at Creedmore during 1887. As this was the main purpose for which that range was established and this association was formed, we have every reason to congratulate ourselves upon the results of the year."

Gen. Wingate declined the re-election as President and Gen. John B. Woodward was chosen in his stead.

The treasurer's report showed a balance on hand at the close of the year of \$1,006.95, to which may be

added the sum of \$200 which will shortly be paid in for railroad tickets sold and redeemed.

The secretary in his report said: "The increase in the number of marksmen in the State from 3,400 in 1885 to 3,600 in 1886, and 4,700 in 1887 shows that the current is moving in the right direction."

Major H. C. Brown, Capt. G. Henry Witthaus, James Duane, Lieut. J. S. Shepherd and Major Geo. Shorkley were elected Directors for three years; Lieut. D. A. Nesbitt Director for two years, and Major C. A. H. Bartlett for one year.

(Correspondence of the Army and Navy Journal.)

#### OHIO NATIONAL GUARD

It is said that the finest parade ever seen in Columbus was the one that passed the reviewing stand at the inauguration of Governor Foraker, Jan. 9. It took the column an hour and a half to pass the reviewing stand. The first division was composed principally of political clubs, many of which marched in excellent style.

The second division was composed of military organizations as follows:

First Brigade. Colonel George D. Freeman, commanding.—Cleveland City Troop, Capt. Geo. A. Garretson; 1st Regt. Light Artillery, O. N. G.—Batteries H. C. A and E—on foot, Colonel Louis Smith, commanding; Cleveland Grays, Capt. W. C. Morrell; Gatling Gun Battery, Capt. L. C. Hanna; Co. A, 5th Regt., Cleveland, Capt. Davis; Co. I, 1st Regt., Cincinnati, Capt. Jno. Foelinger; Co. B, 16th Sandusky, Capt. E. B. King; Co. B, 9th Battalion (colored), Capt. Johnston; Co. A, 9th Battalion (colored), Capt. Martin; 14th Regt., Lieut.-Colonel Colt, commanding—Cos. A, F, D, I, H, E, C, K, G and B; Grand Army Drill Corps, Columbus.

Second Brigade. Colonel E. J. Pocock, commanding.—17th Regt., Lieutenant-Colonel commanding—Cos. K, A, G, C and B; Co. C, 1st Regt., Cincinnati, Capt. Brenner; Canton Independent Battalion Infantry, Major Barnes—Cos. A, B and C; State University Battalion—Cos. A and B—Lieut. Kilbourne, U. S. A., cmdg; Co. B, 16th Regt., Capt. Maynard; Co. F, 6th Regt., Capt. Anderson; Co. E, 6th Regt., Capt. Bostwick; Co. D, 6th Regt., Capt. Hicks; Co. I, 8th Regt., Capt. Aurd; Co. E, 3d Regt., Capt. McCool; Co. F, 3d Regt., Capt. Hunter; Co. A, 13th Regt., Capt. Wagner; Co. G, 13th Regt., Capt. Harris.

The day was just a trifle cool and the streets in quite good condition, and the men did their best.

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### ADDENDA TO BAIRD'S INDEX,

CARRYING IT UP TO DEC. 1ST, 1887.

A complete guide to all Changes in the Regulations. The proceedings of the Board on proposed New Regulations are still in the office of the Secretary of War for revision, and in ordinary course of routine will require time for consideration and review, before receiving final authority for adoption. It is evident that the time of their publication is indefinite. The Index enables you to erase or amend General Orders published since the appearance of the present Regulations, which have been modified by subsequent orders or circulars. You can turn at once to the latest authority on all subjects not in the Regulations, but established by War Department orders and circulars, "decisions" on, Tactics of the Three Arms, Guard Duty, Allowances, Expenditures, Telegrams, Accounts, Uniform, Quarters, Mileage Transportation, etc.

Price of Addenda to those who have purchased the Index, 25 cents. Price of Index and Addenda complete, \$1.00.  
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The Cleveland City Troop was handsomely mounted, and attracted much attention. This organization has been independent until a few months ago, when it was induced to join the N. G. It is said the troop represents upwards of thirty million dollars worth of property. The Cleveland Grays and Gatling Battery also attracted general attention. They are a handsome body of men and are splendid marchers. The Canton Battalion did itself proud, and is an organization of fine young men. It is not necessary to say they are wanted in the Guard. On this occasion Cleveland has won the top slice of cake.

The arrangements for feeding the citizen soldiery, under the direction of Capt. Henry A. Guitner, were almost perfect. F. G. S.

## NEW HAMPSHIRE.

Adjutant-General A. D. Ayling, of New Hampshire, has issued in a G. O. report of Brevet Brig.-Gen. R. H. Jackson, Major 5th Art., U. S. A., his report upon the camp of the First Brigade, N. H. N. G., in June last. The following were the commissioned officers of the N. H. Guard during the six months ending Dec. 31, 1887: First Regiment—1st Lieut. and Adj. Alfred F. Eaton; 1st Lieut., Jeremiah H. Soly, Co. H; 1st Lieut., Thos. H. Kendrigan, Co. K; Capt. Edward D. Smith, Co. D; 1st Lieut. Bion I. Browne, Co. D; 2d Lieut. Walter W. Scott, Co. D; Capt. Michel Lebreche, Co. H; 2d Lieut. John Fitzmaurice, Co. K; Capt. Miner G. Frye, Co. F; 2d Lieut. Leighton H. McIntire, Co. F. Second Regiment—Capt. Chas. A. Roby, Paymaster; 2d Lieut. G. Ira Berry, Co. E. Third Regiment—2d Lieut. Dana W. Horne, Co. K.

## CALIFORNIA NATIONAL GUARD.

The *Alta* is disposed to be cynical toward the California militia, of which it says: "A resumé of this year's doings of the National Guard of California would not show that the organization had accomplished very much to its credit, which is due as much to the officers as to the rank and file. It is alleged by the latter that the former element seeks for nothing but the bright tinsel that marks their rank; they delight to parade and show their feathers, which, in case of war, might be of virgin white. The officers, on the other hand, never tire of telling how they labor to encourage attendance at drill, and to camp duties once each year for a brief week. As a matter of fact, the National Guard of this State possesses so many side issues that discipline is ignored to favor the aspirations of a few officers whose greatest delight is in pomp and parade. The rank and file know this, and being the social equals or superiors of the former, do not perform their duties with that vim and *esprit de corps* which should characterize the soldier."

"The gallant 3d Infantry does not seem at all anxious to fill the vacancy existing in its lieutenant-colonelcy. Major Barry has been in command long enough to acquire the office, and it is surprising why he does not get there, for he has the ability and the ginger to make a good commander."

## THIRTEENTH REGIMENT.—COLONEL D. E. AUSTEN.

Under orders from regimental headquarters, this command assembled at its armory Thursday evening, Jan. 12, for review and inspection. Col. Austen was the reviewing officer, and made a careful inspection, especially of the arms, accoutrements and company books and papers, which last was the special object of the inspection.

The regiment turned out in excellent numbers—the very creditable total of 424 being present. The general appearance of the men was good and soldierly, though a little more attention to the rolling and strapping of the overcoats is needed.

The line was formed nicely and the review was fairly done. The companies were not equalized and from this there resulted some gains and losses of distances, as was to be expected. The manual was good, but might be much better.

The inspection found some of the companies in very excellent shape, but in others, the books were very imperfect and there were very large shortages, such items as "26 overcoats missing," "8 helmets missing," etc., appearing in the report. The books of one company were so bad that a new set will be asked for. Col. Austen will also ask for a board of survey on the missing property.

A full company, over 100 strong, is forming in Dr. Talmage's church, and will be received into the 13th. This will necessitate the consolidation of two of the existing companies, as the regiment has ten companies. Among them, it will be remembered, is the Plymouth Church Company, organized by Mr. Beecher, and the addition of a second body of saints should bring the percentage of piety in the 13th up to a high figure. It is to be hoped that the old maxim, "the nearer to the church the further from God," will not apply to the 13th.

A distinctive undress uniform is to be adopted.

## MILITIA ITEMS.

The 47th N. Y. are ordered to assemble for drill and inspection as follows: Right wing, Cos. B, F, D and K, on Monday, Jan. 16, and Monday, Jan. 23; left wing, Cos. A, E, G and I, on Friday, Jan. 20, and Friday, Jan. 27. Regimental drill Friday, Feb. 3. Assembly at 8 o'clock.

Col. Partridge has ordered a review of the 23d N. Y. Regt. for Saturday, Jan. 21. The regiment will be reviewed on that occasion by Mayor A. C. Chapin. Dancing will follow up to midnight. Battalion drills have been ordered for Jan. 10, 12 and 18.

Competition shooting will soon begin on the armory range of the 14th N. Y. Regt. for new armory badges. Two companies will compete at a time.

The rifle range in the 23d N. Y. Regt. armory has been overhauled at an expense of nearly \$1,000, and electric indicators added. Instead of the old two ranges four have been constructed, the necessary room having been gained by placing the markers overhead and making their position more secure.

The 23d N. Y., having spoiled their white Austrian uniforms on their march in the rain to State camp last summer, have applied for the issuing of the State service uniform.

Some of the company inspections will have to be made during the rest of the present season by the N. Y. Inspector-General and his assistants. It has been decided to omit the 7th, 22d and 23d Regts., as an inspection is not deemed necessary in those commands and time is lacking.

Colonel McGrath, in his annual report, gives his experience while in the N. Y. State Camp last summer. He only criticizes where he had to find fault with the commanding officers of the several organizations. He only found occasion to speak of the action of the commanding officers of the 9th Regiment of N. Y. City, and of the 10th Battalion, of Albany.

The State Commission which had charge of selecting a new overcoat for the National Guard of N. Y. State have completed their work. They recommend a light blue material in the shape of a surcoat, snug fitting and somewhat longer than the one now in use. It will have a deep collar and a cape somewhat longer than the present coat. The Federal Government will be asked to issue 500 artillery overcoats, of the pattern worn by the Regulars, for the use of the light batteries throughout the State, as part of the contribution to this State, as the appropriation is insufficient.

Mayor Chapin, of Brooklyn, is to review the 32d N. Y. on the occasion of its annual review, dress parade and ball on Jan. 23.

Captain Wm. V. Peacon, of Co. I, 14th N. Y., died Friday morning, Jan. 7, at St. Vincent's Hospital, N. Y. He was a native of Dublin, Ireland, and served in the Grenadier Guards, before he came to this country.

A joint review and dress parade of the 7th and 23d N. Y. regiments is proposed for the spring in Prospect Park, Brooklyn, or Central Park, New York.

Capt. Edw. Verdeckberg, 32d New York, has won the Kinkel marksman's medal for the best score at Creedmoor for the third time. The trophy, under the conditions of its presentation, now belongs to him. Capt. Verdeckberg has been chosen Major of the 32d. He entered the Service as private Co. H, 47th, April 3, 1878; was appointed 1st lieutenant of the 3d Nov. 18, 1881, and captain March 31, 1882.

Drills of instruction for officers of the 13th Regiment, N. Y., commenced Wednesday, Jan. 4th, and for non-commissioned officers Friday, Jan. 6th. A regimental inspection is ordered for Thursday, Jan. 12, and a battalion drill for Thursday, Jan. 19th. Orders have also been issued for monthly instruction in rifle practice.

Gen. Edward Burd Grubb, Capt. of the Philadelphia City Troop, entertained that popular and aristocratic organization at his home near Edgewater, N. J.

## DON'T WORRY.

## THE SHREWD BUSINESS MAN'S METHOD OF OVERCOMING DIFFICULTIES.

"Is there a fatality among our prominent men?" is a question that we often ask. It is a question that perplexes our leading medical men, and they are at a loss to know how to answer it.

We sometimes think that if the physicians would give part of the energy to the consideration of this question that they give to combatting other schools of practice, it might be satisfactorily answered.

The fight of "isms" reminds us often of the quarrels of old Indian tribes, that were only happy when they were annihilating each other.

If Allopathy makes a discovery that promises good to the race, Homoeopathy derides it and breaks down its influence. If Homoeopathy makes a discovery that promises to be a boon to the race, Allopathy attacks it.

It is absurd that these schools should fancy that all of good is in their methods and none in any other.

Fortunately for the people, the merit which these "isms" will not recognize, is recognized by the public, and the public recognition, taking the form of a demand upon the medical profession, eventually compels it to recognize it.

Is it possible that the question has been answered by shrewd business men? A prominent man once said to an inquirer, who asked him how he got rich, "I got rich because I did things while other people were thinking about doing them." It seems to us that the public have recognized what this fatality is, and how it can be met, while the medical profession have been wrangling about it.

By a careful examination of insurance reports we find that there has been a sharp reform with reference to examinations, (and that no man can now get any amount of insurance who has the least development of kidney disorder,) because they find that sixty out of every hundred in this country do, either directly or indirectly, suffer from kidney disease. Hence no reliable company will insure a man except after a rigid urinary examination.

This reminds us of a little instance which occurred a short time ago. A fellow editor was an applicant for a respectable amount of insurance. He was rejected on examination, because, unknown to himself, his kidneys were diseased. The shrewd agent, however, did not give up the case. He had an eye to business and to his commission, and said: "Don't you worry; you get a half dozen bottles of Warner's safe cure, take it according to directions and in about a month come around, and we will have another examination. I know you will find yourself all right and will get your policy."

The editor expressed surprise at the agent's faith, but the latter replied: "This point is a valuable one. Very many insurance agents all over the country, when they find a customer rejected for this cause, give similar advice, and eventually he gets the insurance."

What are we to infer from such circumstances? Have shrewd insurance men, as well as other shrewd business men, found the secret answer to the inquiry? Is it possible that our columns have been proclaiming, in the form of advertisements, what has proved a blessing in disguise to millions, and yet by many ignored as an advertisement?

In our files we find thousands of strong testimonials for Warner's safe cure, no two alike, which could not exist except upon a basis of truth; indeed, they are published under a guarantee of \$5,000 to any one who will disprove their correctness, and this offer has been standing, we are told, for more than four years.

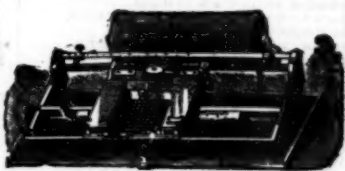
Undoubtedly this article, which is simply dealing out justice, will be considered as an advertisement and be rejected by many as such.

We have not space nor time to discuss the proposition that a poor thing could not succeed to the extent that this great remedy has succeeded, could not become so popular without merit even if pushed by a Vanderbilt or an Astor.

Hence we take the liberty of telling our friends that it is a duty that they owe to themselves to investigate the matter and reflect carefully, for the statements published are subject to the refutation of the entire world. None have refuted them; on the contrary hundreds of thousands have believed them and proved them true, and in believing have found the highest measure of satisfaction, that which money cannot buy, and money cannot take away.

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New Jersey, on the Delaware, a short time since. All the troops appeared in full uniform, and there were only two civilians present. Gen. Grubb had to go through an ordeal once, just after the war, that was quite as trying in its way as the enemy's fire. A private in his brigade asked the privilege of naming a child after him, and begged the General to stand godfather. This he consented to do; but he very much regretted his conspicuous position before the chancel railing when the proud father, in answer to the clergyman's inquiry for the child's name, replied in stentorian tones, "General Grubb." And so it was christened.

Orders No. 143, 2d Regt., N. G., S. N. Y., publish the names of 100 delinquents who have been fined various amounts, from \$1 to \$154. E. J. Reynolds, of Co. I, having this latter sum to his debit; R. P. Beck, Co. E, has \$62.25; W. Grove, \$32; H. L. Clark, B, \$42.75; M. W. Radd, C, \$63; J. B. Dwyer, D, \$44; H. T. Mayo, E, \$40; H. V. Quinn, E, \$43; G. M. Brown, H, \$33; E. S. Coombs, H, \$56; D. M. Patterson, H, \$49; C. Speir, H, \$32; L. S. Davis, K, \$46.75; E. D. McManus, \$45; J. J. Wood, K, \$48. One-half of the whole number of the delinquents are found in Cos. E and H, the first having 26 and the second 25. The total amount of fines is \$2,344.50, distributed as follows: Cos. E, \$550.50; H, \$474.50; I, \$374.50; K, \$322.50; B, \$175.75; C, \$143; E, \$110.25; G, \$90.25, and F, \$75.

The regular meeting of the 7th Co., 7th Regt., N. G., S. N. Y., will be held on Friday evening, Jan. 13, at 8 o'clock. The Committee on Discipline will meet regularly on the third Friday evening of the months of February, April, June, October and December, from 7.30 until 9 o'clock.

A Court-martial will be held in the armory of the 3d Regiment, N. J., at which Capt. Dey and Lieut. Watson, of Co. D, are to be tried for neglect of duty during the parade at the Philadelphia Constitutional celebration.

#### CASTING A STEEL GUN.

DESCRIBING the process of casting a 6 in. steel gun at Pittsburg, alluded to elsewhere, the N. Y. Times says: "The complete mold stood on its end in a pit dug for the purpose, its top rising about 6 feet above the ground. A platform of about 10 feet square was built on a level with the top of the mold. Ascending a short ladder to the platform, Mr. Hainsworth explained to the naval officers the preparations already made. About 60 workmen were engaged in the various operations connected with the casting. Lieuts. Wainwright, Eaton, and Forse and Ensign Fletcher, of the U. S. Navy, all Government steel inspectors, now in the city, were present. The molten iron was brought from the blast furnace and poured into the great converter in the centre of the works. 16,500 lbs. of melted iron were poured into it. This is the largest weight that has ever been put in the steel-casting company's converter. The enormous engine was then started and began to drive the air through the converter with fearful force. The iron contains a large percentage of silicon, which by this action of the air is burned out. When the air was forced into the converter the flames leaped from its mouth in a solid column, and accompanying this column was a shower of sparks bursting forth, which fell on every side like a rain of stars. The most brilliant pyrotechnical exhibition ever imagined by man could but give the faintest idea of the brilliancy of this shower of fire. A rain of meteor, all the stars of the heavens gathered into a circle of a few hundred feet and then scattered by a thunderbolt could have made no more wonderful exhibition.

"The converter, which at first stood in a half upright position, was slowly righted and the huge tongue of flame leaped into the spacious mouth of the overhanging gooseneck. The blowing began at 2.54 o'clock and continued until 3.23, when they agitated the metal. At 3.35 they began pouring into the molds, and at 3.37 it was all over. The work for which it had taken months of preparations and expensive experiments was in two minutes finished, and to the satisfaction of Mr. Hainsworth.

"The gun, when completed, will be five and one-half tons, its total length being 193.53 inches. The physical characteristics of the gun called for by the Government specifications are: Ultimate strength,

80,000 lbs. per square inch; elastic limit, 40,000 lbs. per square inch; elongation, 7 per cent. in 2 inches; reduction, 7 per cent. The steel from which the gun was cast is similar to that used in an unforged shaft casting made by this company and tested on Jan. 2, 1888, which showed an ultimate strength of 94,040 lbs. per square inch; elastic limit, 48,750 lbs. per square inch; elongation, 15 per cent. in 2 inches.

#### DENVER, COL.

A CORRESPONDENT writes: "Things are not running as smoothly at the new post near Denver as they might. Although the troops have been on the ground since about Oct. 20 last, they are not all in temporary quarters yet. Supplies are also scarce, the post being destitute of such necessities as coal oil, clothing, etc.

#### Military Order of the Loyal Legion.

At a meeting of the Minnesota Commandery, held Jan. 4, Capt. J. N. Searies read an extremely interesting paper entitled "The Black and Tan Infantry." It was a vivid account of some of the deeds of daring done by the "old fire" during the times that tried men's souls. Among those present were General Ruger and his staff and several Army officers from Fort Snelling.

#### REVENUE MARINE.

2d Lieut. W. S. Howland 2d Asst. Engr. Thos. B. Brown, assigned to temporary duty on the steamer Grant at New York.

Mr. Guenther, of Wis., has introduced his old bill to promote the efficiency of the Revenue marine service, and it has been referred to the Committee on Commerce, which, as just organized, consists of: Clarv, Mo.; Crisp, Ga.; Tarsney, Mich.; Rayner, Md.; A. R. Anderson, Ia.; Logan, La.; Wilson, Minn.; Bryce, N. Y.; Phelan, Tenn.; O'Neill, Pa.; Dunham, Ill.; Davis, Mass.; J. A. Anderson, Kan.; Davenport, N. Y.; Browne, Va.

The New York Herald of Jan. 9 publishes a long article headed "Cruising for Castaways. A Winter Voyage on One of Uncle Sam's Revenue Cutters. Gallant Work in the Life-boat. Help Extended to the Helpless Amid Roaring Winds and Raging Seas."

#### ANSWERS TO CORRESPONDENTS.

A. J. E.—Has there ever been a gun constructed that can throw a shell fifteen miles? **Ans.**—No.

Subscriber asks: Is there a Q. M. sergeant and commissary sergeant stationed at Los Angeles, Cal., or any U. S. troops there? **Ans.**—No. Gen. Nelson A. Miles, commanding Dept. of Arizona, has his headquarters at Los Angeles, and of course his staff clerks, etc., are stationed there, but no troops in the usually understood sense.

E. A. H.—A soldier having served in the Army or Navy during the War of the Rebellion for over ninety days can obtain 160 acres of any of the public lands by filing himself or by an attorney a declaratory statement, and within six months thereafter filing his affidavit and application, commencing settlement and cultivation, and continuing the same for five years, less the time he served in the Army or Navy. His widow can take advantage of the above. In case of his death in the Army the term of his enlistment is deducted.

#### FOREIGN ITEMS.

At the present moment the Mauser rifle factory at Oberndorf is busily engaged in turning out 700,000 repeating rifles for the Turkish Government. Eight officers of the Turkish Army are residing in a Moorish villa at Oberndorf for the purpose of taking over the weapons when ready.

The European war cloud which has been long over-due, has made its appearance at last. Our London, Berlin and St. Petersburg despatches assure us that this is the genuine article, and has no connection with those other imitation clouds which for the past ten months have been fooling about the European horizon.

The last of the Janissaries died a few days ago at Scrajevo, a man named Zeli Baba, aged 102. When the Janissaries were massacred in 1826, by order of the Sultan Mahmoud II., Zeli Baba escaped and took refuge in Russia. He was a man of great abilities, and published a book of Persian poems which are much read in the East.

PORTABLE railways of a new type will assuredly be among the leading features of the next great war," says the St. James's Gazette. "The latest invention in this line is the idea of an Austrian engineer, Herr Leinwather. His rails are said to be the best of the kind ever made, being especially good over uneven ground. The Austrian War Office has ordered a small supply, and will make a trial of the railway at once. Germany has also asked Herr Leinwather for samples both of his rails and wagons."

WITH the hostile forces of Abyssinia and Italy drawing closer, the Red Sea for the moment attracts much of the public attention that had been centred on the Black. Italy's concession to Spain of a fifteen years' right to a coaling station on Asab Bay indicates her purpose permanently to occupy that region. The bay is capacious, having a width of about five miles and a length three times its width, so that there will be room enough for such Spanish vessels as may find their way there, even with all the rights of occupation reserved by Italy.

"Now is the winter of our discontent made glorious summer" by smoking "FANILL'S PUNCH," America's finest 5c. Cigar.

MANY old soldiers suffer from rheumatism, aches, pains and stiff joints resulting from years of exposure. They obtain prompt and permanent relief in BENSON'S PLASTERS, the most powerful and efficient external remedy known to medical science for relief of human suffering. Dishonest dealers will try to sell worthless imitations of BENSON'S PLASTERS, but careful buyers will avoid such sharks.

#### MARRIED.

FOUNTAIN-McGRATH.—At the Cathedral, Philadelphia, January 11, Lieutenant S. W. FOUNTAIN, 8th U. S. Cavalry, to Miss KATHARINE G. McGRATH, daughter of the late Wm. V. McGrath.

PERRINE-SCUDDER.—At Trenton, N. J., January 10, Captain HENRY PRATT PERRINE, 6th U. S. Cavalry, to Miss LOUISE SCUDDER, daughter of Judge Edward W. Scudder, of the New Jersey Supreme Court.

#### DIED.

BIDWELL.—At East Hartford, Conn., Dec. 30, MARY SUMNER, wife of Charles M. Bidwell, and mother of Lieutenant W. P. Newcomb, 5th U. S. Artillery.

CARRINGTON.—At his home, near Milledgeville, Ga., LA FAYETTE CARRINGTON, father of Lieutenant F. de L. Carrington, 1st U. S. Inf., and Asst. Surgeon P. M. Carrington, U. S. Marine Hospital Corps.

CHAMBERS.—At San Antonio, Texas, January 2, Colonel ALEXANDER CHAMBERS, 17th U. S. Infantry, Brevet Brigadier-General of Volunteers.

DUPONT.—At Louviers, near Wilmington, Delaware, on Monday, January 9, SOPHIE MADELINE DUPONT, widow of the late Admiral S. F. Dupont, U. S. Navy. Funeral from her late residence on Thursday, Jan. 12, at 2 o'clock P. M.

LEAVY.—At Harper's Ferry, Va., January 4, NORDBORNE LEAVY, son of Brevet Captain J. T. Leavy, U. S. Army, retired.

LEWIS.—Suddenly, at Dayton, O., Jan. 9, Miss EMILY M. LEWIS, sister of Chaplain John K. Lewis, U. S. Navy.

PERRY.—At New Brunswick, N. J., January 9, of pneumonia, AMOS STONE PERRY, formerly of Troy, N. Y.

PRATT.—At Fort Randall, D. T., Dec. 27, OLIVER SHANNON, eldest son and child of D. L. and Gertrude Shannon Pratt, aged six years, one month and ten days.

RUGER.—On January 9, at her late residence, in New York City, FANNIE MORTIMER, widow of the late Oliver J. Ruger and sister of Mrs. Captain D. J. Craigie.

SEAWELL.—At the Berkshire Hotel, San Francisco, Cal., January 1, Brevet Brigadier Gen. WASHINGTON SEAWELL, Colonel U. S. Army, retired.

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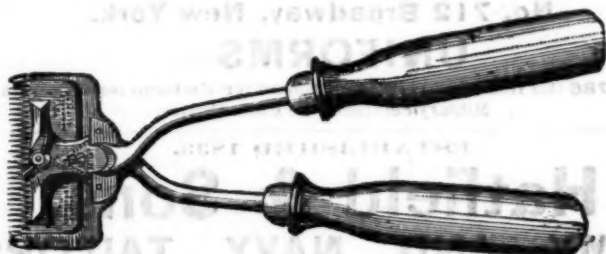
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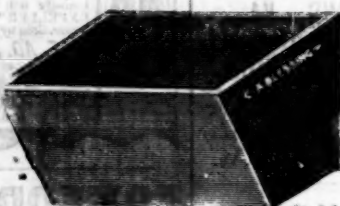
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